



# Material Data Safety Sheet

**Product Name:** Belgian Cocoa - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-COCO-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO2)
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO2)
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m <sup>3</sup> /mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

**Acronyms:**

- EC:* European Commission
- CLP:* Classification Labelling and Packaging
- GHS:* Globally harmonized system on classification and labelling
- DSD:* Dangerous Substance directive
- EWC:* *European Waste Catalogue*
- AVV:* Waste codes according to the waste catalogue ordinance
- ADR:* European agreement concerning the International Carriage of Dangerous Goods by Road
- RID:* European agreement concerning the International Carriage of Dangerous Goods by Rail
- LC50:* Lethal concentration, 50 percent
- LD50:* Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Café Mocha - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-CAFE-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.



	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Captain Jack - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-CAPT-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	



## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** CoolMist - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-MIST-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

**Acronyms:**

- EC:* European Commission
- CLP:* Classification Labelling and Packaging
- GHS:* Globally harmonized system on classification and labelling
- DSD:* Dangerous Substance directive
- EWC:* *European Waste Catalogue*
- AVV:* Waste codes according to the waste catalogue ordinance
- ADR:* European agreement concerning the International Carriage of Dangerous Goods by Road
- RID:* European agreement concerning the International Carriage of Dangerous Goods by Rail
- LC50:* Lethal concentration, 50 percent
- LD50:* Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013





# Material Data Safety Sheet

**Product Name:** Freedom Juice - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-FRDM-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**     *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** HX3 - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-HX3X-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

<b>Eye Contact:</b>	May cause eye irritation.
<b>Skin Contact:</b>	May cause skin irritation.
<b>Inhalation:</b>	May be irritating to mucous membranes and upper respiratory tract.
<b>Ingestion:</b>	May cause nausea.

## Section 4: First Aid Measures

<b>Eye Contact:</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact:</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Serious Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.
<b>Serious Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.



	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Kringles Curse - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-KRNG-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	



## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

**Acronyms:**

- EC:* European Commission
- CLP:* Classification Labelling and Packaging
- GHS:* Globally harmonized system on classification and labelling
- DSD:* Dangerous Substance directive
- EWC:* *European Waste Catalogue*
- AVV:* Waste codes according to the waste catalogue ordinance
- ADR:* European agreement concerning the International Carriage of Dangerous Goods by Road
- RID:* European agreement concerning the International Carriage of Dangerous Goods by Rail
- LC50:* Lethal concentration, 50 percent
- LD50:* Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Longhorn - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-LONG-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

<b>Eye Contact:</b>	May cause eye irritation.
<b>Skin Contact:</b>	May cause skin irritation.
<b>Inhalation:</b>	May be irritating to mucous membranes and upper respiratory tract.
<b>Ingestion:</b>	May cause nausea.

## Section 4: First Aid Measures

<b>Eye Contact:</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact:</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Serious Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.
<b>Serious Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013





# Material Data Safety Sheet

**Product Name:** Malibu - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-MLBU-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**     *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Menthol Ice - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-MNIC-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

<b>Eye Contact:</b>	May cause eye irritation.
<b>Skin Contact:</b>	May cause skin irritation.
<b>Inhalation:</b>	May be irritating to mucous membranes and upper respiratory tract.
<b>Ingestion:</b>	May cause nausea.

## Section 4: First Aid Measures

<b>Eye Contact:</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact:</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Serious Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.
<b>Serious Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.



	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Midnight Apple - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-MAPL-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	



## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Mystic - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-MYST-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

<b>Eye Contact:</b>	May cause eye irritation.
<b>Skin Contact:</b>	May cause skin irritation.
<b>Inhalation:</b>	May be irritating to mucous membranes and upper respiratory tract.
<b>Ingestion:</b>	May cause nausea.

## Section 4: First Aid Measures

<b>Eye Contact:</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact:</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Serious Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.
<b>Serious Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013





# Material Data Safety Sheet

**Product Name:** Prime15 - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-PRME-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m <sup>3</sup> /mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Shamrock - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-SHAM-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

<b>Eye Contact:</b>	May cause eye irritation.
<b>Skin Contact:</b>	May cause skin irritation.
<b>Inhalation:</b>	May be irritating to mucous membranes and upper respiratory tract.
<b>Ingestion:</b>	May cause nausea.

## Section 4: First Aid Measures

<b>Eye Contact:</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact:</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Serious Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.
<b>Serious Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.



	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Tiki Juice - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-TIKI-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO2)
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO2)
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	



## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

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**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Torque 56 - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-TORQ-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

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**Date Issued:** 12/16/2013





# Material Data Safety Sheet

**Product Name:** Tribeca - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-TRIB-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m <sup>3</sup> /mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Truepure - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-TRUE-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.



	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m <sup>3</sup> /mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

**Acronyms:**

- EC:* European Commission
- CLP:* Classification Labelling and Packaging
- GHS:* Globally harmonized system on classification and labelling
- DSD:* Dangerous Substance directive
- EWC:* *European Waste Catalogue*
- AVV:* Waste codes according to the waste catalogue ordinance
- ADR:* European agreement concerning the International Carriage of Dangerous Goods by Road
- RID:* European agreement concerning the International Carriage of Dangerous Goods by Rail
- LC50:* Lethal concentration, 50 percent
- LD50:* Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Turkish Tobacco - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-TURK-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**     *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	



## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

**Acronyms:**

- EC:* European Commission
- CLP:* Classification Labelling and Packaging
- GHS:* Globally harmonized system on classification and labelling
- DSD:* Dangerous Substance directive
- EWC:* *European Waste Catalogue*
- AVV:* Waste codes according to the waste catalogue ordinance
- ADR:* European agreement concerning the International Carriage of Dangerous Goods by Road
- RID:* European agreement concerning the International Carriage of Dangerous Goods by Rail
- LC50:* Lethal concentration, 50 percent
- LD50:* Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Twisted Java - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-JAVA-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO2)
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO2)
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**     *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013





# Material Data Safety Sheet

**Product Name:** Souther Classic - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-SOTH-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions**    *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depleters.  
Does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

**Disclaimer:** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** SubZero - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-SUBZ-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.



	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>	Refill liquid for use in electronic cigarettes.	

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	

## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**  
Not Regulated

**DOT Bulk**  
Not Regulated

**IMDG**  
Not Regulated

**ICAO/IATA**  
Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

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**Date Issued:** 12/16/2013



# Material Data Safety Sheet

**Product Name:** Voodoo - 00 mg/ml

## Section 1: Product and Company Identification

<b>Product ID:</b>	ELIQ-VODO-00MG	<b>Contact Information:</b>	The Halo Company
<b>Synonyms:</b>	E-liquid, E-Juice, Essence		PO Box 406
<b>CAS#:</b>	Mixture		Pompton Plains, NJ 07444
<b>RTEC:</b>	Not Available		United States Of America
<b>CI#:</b>	Not Available		Phone: (1) 888-425-6649 x701

## Section 2: Composition Information

**Description:** This mixture contains USP Grade Propylene Glycol, USP Grade Glycerin. Mixture is prepared under GMP conditions.

Ingredient	Chemical Name	Formula	CAS#	Amount
<b>Propylene Glycol, USP</b>	1,2-propanediol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	57-55-6	< 55% by weight
<b>Glycerin, USP</b>	1,2,3-propanetriol	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	56-81-5	< 45% by weight
<b>Proprietary Flavor Blend:</b>	N/A	N/A	N/A	< 15% by weight

## Section 3: Hazards Identification

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause skin irritation.

**Inhalation:** May be irritating to mucous membranes and upper respiratory tract.

**Ingestion:** May cause nausea.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

**Serious Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## Section 5: Fire and Explosion Data

### General Information:

<b>Propylene Glycol, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	371 °C
	<i>Flash Points:</i>	Closed Cup: 99 °C / Open Cup: 107 °C
	<i>Flammable Limits :</i>	Lower: 2.6% / Upper: 12.5%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in presence of heat.
<b>Glycerin, USP</b>	<i>Flammability:</i>	May be combustible at high temperature.
	<i>Auto-Ignition Temp.:</i>	370 °C
	<i>Flash Points:</i>	Closed Cup: 160 °C / Open Cup: 199 °C
	<i>Flammable Limits :</i>	Lower: 0.9%
	<i>Products of Combustion:</i>	Carbon Oxides (CO, CO <sub>2</sub> )
	<i>Explosive Hazards:</i>	Not Available
	<i>Fire Hazards:</i>	Slightly flammable to flammable in in presence of heat, open flames, and sparks. Explosive in presence of oxidizing materials.

### Fire Fighting Media and Instructions

**Suitable Extinguishing Media:** Use water spray, carbon dioxide, dry chemical powder or foam.

**Unsuitable Extinguishing Media:** Do not use extinguishing media containing oxidizing agents.

## Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Handling Precautions** *Safe Handling:* Do not allow getting into eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

	<i>Environment:</i>	Avoid runoff into storm sewers and ditches which lead to waterways.
	<i>Incompatibility:</i>	Keep away from oxidizing agents and strong acids.
<b>Storage Precautions</b>	<i>Temperature:</i>	Store between 50°F - 70°F. Keep away from high heat.
	<i>Sunlight:</i>	Store protected from sunlight and artificial light.
	<i>Humidity:</i>	Store in a cool dry place protected from moisture.
	<i>Ventilation:</i>	Provide adequate ventilation. Keep away from fumes.
	<i>Packaging:</i>	Store in tightly closed containers. Do not reuse containers.
<b>Specific Use</b>		Refill liquid for use in electronic cigarettes.

## Section 8: Exposure Controls and Personal Protection

<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.		
<b>Personal Protection:</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.		
<b>Personal Protection: (Large Spills)</b>	Splash goggles, full suit, vapor respirator, boots and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.		
<b>Exposure Limits:</b>	<b>Propylene Glycol, USP</b>	<i>United States (AIHA)</i>	10 mg/m <sup>3</sup>
	<b>Glycerin, USP</b>	<i>United States (OSHA)</i>	15 mg/m <sup>3</sup>
		<i>Netherlands</i>	0.07 ppm MAC
		<i>Spain</i>	0.5 mg/m <sup>3</sup> VLA-ED

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	Not Available
<b>Color</b>	Clear to Light Yellow	<b>Density:</b>	1,125 g/cm <sup>3</sup>
<b>Odor:</b>	Slightly Pungent	<b>Rel. Density:</b>	Not Available
<b>pH-value:</b>	Not available	<b>Vapor Density:</b>	>1 vs aih
<b>Boiling point:</b>	250°C	<b>Evaporation Rate:</b>	Not Available
<b>Freezing Point:</b>	-65° C	<b>Water Solubility:</b>	50 mg/ml
<b>Viscosity:</b> (Dynamic at 20°C)	600 mPas		

## Section 10: Stability and Reactivity

<b>Chemical Stability:</b>	Stable	<b>Polymerization:</b>	Will Not Occur
<b>Reactivity:</b>	Reactive with oxidizing agents, reducing agents, acids, alkalis.		
<b>Instability Conditions:</b>	Avoid contact with incompatible materials, excess heat and ignition sources.		

## Section 11: Toxicology Information

<b>Propylene Glycol, USP</b>	<i>Oral, Rat:</i>	LD50	= 20,000 mg/kg
	<i>Oral, Mouse:</i>	LD50	= 22,000 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 20,800 mg/kg
<b>Glycerin, USP</b>	<i>Oral, Rat:</i>	LD50	= 12,600 mg/kg
	<i>Oral, Mouse</i>	LD50	= 4,090 mg/kg
	<i>Dermal, Rabbit:</i>	LD50	= 10,000 mg/kg
	<i>Mist, Rat</i>	LC50	= 570 mg/m <sup>3</sup> / 1 hour (Based on 4-hour exposure)

## Section 12: Ecological Information

<b>Propylene Glycol, USP</b>	<i>Toxicity:</i>	Fish ( <i>Oncorhynchus mykiss</i> )	96 h: LC50 = 40,613 mg/l
		Water Flea ( <i>Ceriodaphnia Dubia</i> )	48 h: LC50 = 18,340 mg/l
	<i>Degradability:</i>	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).	
	<i>Accumulation:</i>	Bioconcentration potential is low (BCF < 100 or Log Pow < 3) Log Pow used: -1.07 EU Method A.8 (Partition Coefficient) Bioconcentration Factor (BCF): 0.09; Estimated.	
<b>Glycerin, USP</b>	<i>Mobility in Soil:</i>	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50). Koc: < 1 (estimated) Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured	
	<i>Toxicity:</i>	No aquatic environmental information is available on this product.	
	<i>Degradability:</i>	This product is completely biodegradable.	
	<i>Accumulation:</i>	Bioaccumulation of this product has not been determined.	
	<i>Mobility in Soil:</i>	Mobility of this material has not been determined. Low potential for sorption to soil. Glycerine will partition primarily to water.	



## Section 13: Disposal Considerations

**DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

**Sewage Disposal:** Avoid release to environment. Do not wash away into sewer.

**Chemical Properties:** Substance is hygroscopic and should not be allowed to come in contact with moisture/water.

## Section 14: Transport Information

### US FEDERAL

**DOT Non-Bulk**

Not Regulated

**DOT Bulk**

Not Regulated

**IMDG**

Not Regulated

**ICAO/IATA**

Not Regulated

## Section 15: Regulatory Information

### US FEDERAL

**Clean Air Act:** Does not contain any hazardous air pollutants.  
Does not contain any Class 1 Ozone depletors.  
Does not contain any Class 2 Ozone depletors.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:** Not considered highly hazardous by OSHA.

## Section 16: Other Information

<b>Acronyms:</b>	<i>EC:</i> European Commission
	<i>CLP:</i> Classification Labelling and Packaging
	<i>GHS:</i> Globally harmonized system on classification and labelling
	<i>DSD:</i> Dangerous Substance directive
	<i>EWC:</i> <i>European Waste Catalogue</i>
	<i>AVV:</i> Waste codes according to the waste catalogue ordinance
	<i>ADR:</i> European agreement concerning the International Carriage of Dangerous Goods by Road
	<i>RID:</i> European agreement concerning the International Carriage of Dangerous Goods by Rail
	<i>LC50:</i> Lethal concentration, 50 percent
	<i>LD50:</i> Lethal dose, 50 percent

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**Date Issued:** 12/16/2013