

SECTION 1 - IDENTIFICATION

GHS Product Identifier:	Vola Mene 5	Company Name:	KML, Incorporated
Other means of identification:	Not available.	Company Address:	P.O. Box 380 108 South Main Street LaOtto, IN 46763-0380
Product type:	Clear Liquid.	Company Phone:	(800) 423-1879
Product use and restrictions on use:	See label and/or product bulletin.	24 Hour Emergency:	(800) 424-9300 CHEMTREC

SECTION 2 - HAZARDS IDENTIFICATION

Hazard Classification of Substance or Mixture: Flammable Liquids - Category 4
Acute Toxicity (oral) - Category 4
Skin Irritation - Category 2
Serious Eye Damage - Category 1
Reproductive Toxicity - Category 2
Specific Target Organ Toxicity, Repeated Exposure - Category 2
Hazardous to the Aquatic Environment, Acute Hazard - Category 3

GHS Label Elements:
Hazard Pictograms:



Signal Word: **DANGER**

<u>Hazard Statements:</u>	H227	Combustible liquid.
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H318	Causes serious eye damage.
	H361	Suspected of damaging fertility or the unborn child.
	H373	May cause damage to Liver and Kidney through prolonged or repeated exposure.
	H402	Harmful to aquatic life.

Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P235	Keep cool.
P260	Do not breathe mist and/or vapors.
P264	Wash areas exposed to product thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective chemical impervious gloves/protective clothing/eye protection and/or face shield.
P301+P312	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice and/or attention from doctor/physician.
P310	Immediately call a POISON CENTER and/or doctor/physician.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment see first aid instructions on the SDS or label.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403	Store in a well-ventilated place.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/state/federal regulations.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS #	% BY WT
Cyclohexylamine	108-91-8	15 - 19
Morpholine	110-91-8	7 - 11

Exact percentages are withheld as trade secrets. While some ingredients are claimed trade secret in accordance with OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

SECTION 4 - FIRST AID MEASURES

Inhalation:	If inhaled, immediately move to fresh air. If individual experiences nausea, headache, dizziness, difficulty in breathing or is cyanotic, seek a health care professional immediately. If breathing stops administer artificial respiration. If breathing is difficult administer oxygen.
Eyes:	Do not rub eyes. With eyelids open, flush eyes immediately with water/saline for a minimum of 15 minutes. Take exposed individual to a health care professional.
Skin:	Remove contaminated clothing. Wash area with soap & water for 15 min. Get medical attention. Wash contaminated clothing. Destroy contaminated shoes.
Ingestion:	DO NOT INDUCE VOMITING. If conscious, first rinse mouth with copious amounts of water. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water. Seek immediate medical assistance or contact the Poison Control Center.
Notes to physician:	No specific antidote is known. Probable mucosal damage may contraindicate the use of gastric lavage. Suggest use of endotracheal intubation if stomach contents are evacuated. Treat symptoms. If burn is present, treat as a thermal burn, after decontamination.

See toxicological information (Section 11)

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing Media:	Water fog, carbon dioxide, foam, dry chemical.
Fire-Fighting Procedures:	Use water spray to cool containers to prevent rupture. If spill is ignited, use water spray to disperse vapors. Water may be used to flush spills away from a fire and dilute spills. Do not flush into a storm drain or public sewer.
Hazardous Combustion Products:	Ammonia, hydrogen cyanide & oxides of nitrogen/carbon. Other possible products aminated diethylene glycol, acetaldehyde & formaldehyde.
Unusual Fire/Explosion Hazards:	Closed containers may rupture due to steam pressure build-up if exposed to extreme heat.
Fire-Fighting Equipment:	Self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode. Full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small Spills:	WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT . Soak up with an absorbent material and place in an approved waste disposal container.
Large Spills:	Sweep up or vacuum as much material as possible into a suitable labeled container for reuse or disposal. Do not release into sewers or waterways. Determine if waste containing this product may be handled by available industrial effluent system other on-site waste management unit. If off-site management is required, contact a licensed company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a RCRA hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this act.
Regulatory Requirements:	Follow applicable federal, state, and local regulations governing disposal of waste materials and OSHA regulations (29 CFR 1910.120).

SECTION 7 - HANDLING AND STORAGE

Handling:	Use proper PPE and wash thoroughly after handling. Eyewash and safety showers are recommended in the immediate work area. For industrial use only.
Storage:	This material is safe to store in well ventilated areas at ambient temperatures. Keep containers closed when not in use. Protect product from freezing.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower (ANSI Z358.1). Use adequate general or local ventilation to keep airborne levels to acceptable levels.
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COMPONENT	CAS NUMBER	ACGIH TWA	ACGIH STEL	ACGIH CEILING	OSHA FINAL PEL TWA
Cyclohexylamine	108-91-8	10 ppm	-	-	-
Morpholine	110-91-8	20 ppm	-	-	20 ppm, 70 mg/m3
-	-	-	-	-	-
-	-	-	-	-	-

Respiratory Protection:	Respiratory protection is required for work areas where misting may occur. If necessary, wear MSHA/NIOSH-approved respirator, following OSHA respirator regulations (29 CFR 1910.134).
Ventilation:	Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Protective Gloves:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products to avoid skin contact.
Eye Protection:	Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Do not wear contact lenses. If vapors cause eye discomfort, wear a full face respirator.
Other Protective Equipment:	Not required under normal working conditions. End user must determine if the process or methods involved require other PPE.
Hygienic Practices:	Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Do not wash contaminate clothing with street clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Clear Liquid
Color and Odor:	Colorless - Ammonia Odor
Odor Threshold:	Not available.
pH:	11.0 - 13.0
Freezing Point:	Not available.
Boiling Point:	> 100 F
Flash Point:	160 F (TCC)
Evaporation Rate (BuAc=1):	< 1
Flammability (Solid/Gas):	Not applicable.
Lower & Upper Flammability Limit:	1.8 (Morph) 1.5 (Cyc.) - 10.8 (Morph) 9.4 (Cyc)
Autoignition Temperature:	Not available.
Vapor Pressure (mm Hg@20 C):	Not available.
Vapor Density (Air=1):	> 1
Relative Density @20 C (water=1):	0.98 - 1.00
Solubility in Water:	Dispersible
Partition Coefficient:	Not available.
Decomposition Temperature:	Not available.
Volatile Organic Compounds (%):	Not available.

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Product is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization:	Hazardous polymerization cannot occur.
Chemical Incompatibilities:	Strong acids, oxidizers, strong alkali, organic acids. Contact with nitrites, nitrous oxide or nitrous acid will form carcinogenic nitrosamines.
Conditions to Avoid:	Do not overheat containers. Corrosive to copper, aluminum, zinc and galvanized surfaces.
Hazardous Byproducts:	Thermal decomposition products may include: Ammonia, hydrogen cyanide & oxides of nitrogen/carbon. Other possible products aminated diethylene glycol, acetaldehyde & formaldehyde.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity:	LD50 Oral: > 1600 mg/kg (ATE)
	LD50 Dermal: > 2300 mg/kg (ATE)
	LC50 Inhalation: > 10000 mg/l (ATE)
Irritant/Corrosion	Eyes: Causes corrosion to the eyes. Vapors will be irritating to eyes.
	Skin: Causes strong irritation to skin.
Sensitization:	Respiratory: Not a sensitizer.
	Skin: Not a sensitizer.
Carcinogenicity:	Cyclohexylamine - ACGIH: Not classifiable as a human carcinogen Morpholine - ACGIH: Not classifiable as a human carcinogen.
Reproductive Toxicity:	The ingredients of this product are suspected as being a reproductive toxicant.
Teratogenicity:	No data available for this product.
Specific Target Organ Toxicity (single exposure):	No data available for this product.
Specific Target Organ Toxicity (repeated exposure):	May cause damage to Liver and Kidney through prolonged or repeated exposure.
Aspiration Hazard:	No data available for this product.
Likely Routes of Exposure:	Oral, Dermal
Acute Health Effect:	Eye Contact: Corrosive to the eyes. Vapor may cause transient edema giving rise to excess blinking/tearing.
	Skin Contact: Irritation-burns depending on exposure length. Absorbed through skin may cause malaise.
	Inhalation: Irritation/corrosion of mucous membranes and the lungs. Monitor for respiratory distress, bronchitis or pneumonia.☐
	Ingestion: Burns to mucous membranes, nausea, vomiting, diarrhea, dizziness, drowsiness, thirst, faintness, circulatory collapse, coma & possible death.
Other Health Effects:	Repeat skin exposure may cause dermatitis.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	LC50 Fish: 250 mg/l
	LC50 Crustaceans: 240 mg/l
	EC50 Algae: 90 mg/l
Persistence and Degradability:	No data available for this product.
Bioaccumulation Potential:	No data available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal:	Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable local, state, and federal regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and/or regulations. NOTE: State and local regulations may be more stringent than federal regulations. Empty Containers: Since empty containers retain material residues, all labeled hazard precautions must be observed.
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SECTION 14 - TRANSPORTATION INFORMATION

This material is regulated by the DOT?	Yes
DOT Description from Hazardous Materials Table 49 CFR 172.101:	UN1760, Corrosive liquids, n.o.s., 8, III, (Contains cyclohexylamine, morpholine)
Environmental Hazards (i.e., Marnie Pollutant):	None known.
Special Precautions for User:	Always transport in closed containers that are upright and secure.
In Case of Transportation Emergency Call CHEMTREC:	(800) 424-9300

KML Incorporated

SAFETY DATA SHEET

SECTION 15 - REGULATORY INFORMATION

RCRA Hazardous Waste Number (40 CFR 261.33): No components of this product are listed or are above the de minimus levels.
RCRA Hazardous Waste Classification (40 CFR 261): No components of this product are listed or are above the de minimus levels.
CERCLA Hazardous Substance (40 CFR 302.4): No components of this product are listed or are above the de minimus levels.
CERCLA Reportable Quantity (RQ): No components of this product are listed or are above the de minimus levels.
SARA 312 Hazard Category: Immediate (Acute) Health Hazard, Chronic Health Hazard.
SARA 313 Toxic Chemical: No components of this product are listed or are above the de minimus levels.
SARA 302 Extremely Hazardous Substances List: Cyclohexylamine - TPQ 10,000 lbs,
OSHA Air Contaminant (29 CFR 1910.1000, Table Z-1): No components of this product are listed or are above the de minimus levels.

FDA (Food & Drug Administration): The active ingredients of this product comply with 21 CFR § 173.310 for use as a boiler water additive where steam may contact food products not including milk or milk products.

NSF and/or Kosher Certified: Vola Mene 5 has been certified by the National Science Foundation for treating boiler and steam lines where the steam produced may contact edible products - Category G6 #049369 and certified by cRc as Kosher #CC2143632.

***Note:** The regulatory listings provided herein are not all inclusive of possible regulation affecting this material. It is the end-user's responsibility to determine all local, state, federal, or international regulation/restrictions that may apply.

SECTION 16 - OTHER INFORMATION

Prepared By: Ed Hodges
Title: General Manager

Date Prepared: June 22, 2015

Supersedes: March 31, 2014

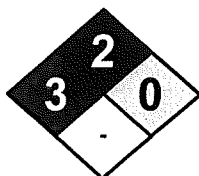
<u>ABBREVIATION</u>	<u>DEFINITION</u>	<u>ABBREVIATION</u>	<u>DEFINITION</u>
N/A	Not Applicable	TLV	Threshold Limit Value
N/E	Not Established	PEL	Personal Exposure Limit
N/D	Not Determined	STEL	Short Term Exposure Limit
UNK	Unknown	C	Ceiling Limit
EHS	Environmental, Health, and Safety Department	TCC	Tag Closed Cup
OSHA	Occupational Safety and Health Administration	PNOR	Particulates Not Otherwise Regulated
ACGIH	American Conference of Governmental Industrial Hygienists	PNOC	Particulates Not Otherwise Classified
IARC	International Agency for Research on Cancer	NTP	National Toxicology Program
ATE	Acute Toxicity Estimate	GHS	Globally Harmonized System of Classification

Hazardous Material Information System:

Health	3
Flammability	2
Reactivity	0
Protection	H

Note: The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use.

National Fire Protection Association:



Note: The National Fire Protection Association (NFPA) warning system is intended to be interpreted and applied by properly trained individual to identify fire, health and reactivity hazards of chemicals. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use.

Disclaimer: The information on this Safety Data Sheet reflects the latest information and data that we have on the hazards, properties, and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described in the Product Bulletin is the responsibility of the user. This Safety Data Sheet was prepared to comply with the OSHA Hazard Communication regulations.

*** END of Safety Data Sheet ***