



**KAR-M-1™**

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Date Prepared: January 19, 2015  
MSDS No.: 1120

**SECTION 1: IDENTIFICATION**

**Product name:** KAR-M-1  
**Recommended use:** Cleaner, degreaser  
**Physical Description:** Clear water white liquid with mild odor  
**Generic Ingredients:** Water, potassium hydroxide and surfactants  
**Manufacturer:** Penetone Corporation  
 700 Gotham Parkway  
 Carlstadt, NJ 07072  
 800-631-1652 or 201-567-3000  
**Business Contact:** Customer Service  
 800-631-1652 x2602 or 2272  
 Product Safety  
 800-631-1652 x2211 or 2257

**Emergency Phone Numbers:** PENETONE 201-567-3000 CHEMTREC 800-424-9300

**SECTION 2: HAZARDS IDENTIFICATION**

**GHS CLASSIFICATION:**

<p><b>Health:</b> Skin corrosion: 1C Eye corrosion: 1 Aspiration hazard: 1</p>	<p><b>Physical:</b> Corrosive to metals - 1</p>
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**DANGER!**  
Causes Severe Skin Burns and Eye Damage.  
May Be Fatal If Swallowed and Enters Airways.  
May Be Corrosive to Metals.



<b>Precautionary Statements:</b>	
<p><u>Prevention:</u> Do not breathe mists if inhalable mists occur during use. Wash hands and exposed skin thoroughly after use. Wear protective gloves, clothing, eye protection, and face protection. Keep only in original container</p> <p><u>Response:</u> If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin or hair: Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>	<p>If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center, doctor, emergency room, or 911. Absorb spillage to prevent material damage.</p> <p><u>Storage:</u> Store locked up. Store in corrosive resistant container, plastic (HDPE) is recommended, or container with a resistant inner liner.</p> <p><u>Disposal:</u> Dispose of contents/container in accordance with local, regional, and national regulations (see Sections 13 and 15 of SDS for disposal and reporting requirements).</p>

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	Concentration Wt% (1)
Water	7732-18-5	80-100
Potassium hydroxide	1310-58-3	1-10
Potassium salt of phosphate ester	not available	1-10



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Ethoxlated nonylphenol

127087-87-0

1-10

(1) Exact percentages being withheld under trade secret provision of OSHA HCS 1910.1200(i)

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## SECTION 4: FIRST-AID MEASURES

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### General Description of Symptoms & First-Aid Measures

Most likely work-place exposure routes will be *skin contact* or *inhalation*.

For *skin contact*, typically no immediate effects will be observed. A tingling or burning sensation might be felt some time after exposure. Slight reddening or minor irritation could also develop if product is not quickly washed off.

*Inhalation* exposure may produce varied effects, particularly if exposure occurs above the recommended workplace exposure limits (see SECTION 8). Typical symptoms could include coughing, sneezing, and a tingling or burning sensation in the nose, throat, and lungs.

### Eyes

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center, doctor, physician or other competent medical authority for medical advice. Penetone recommends that after any eye exposure a physician be seen immediately.

### Ingestion

If swallowed: Rinse mouth. **DO NOT INDUCE VOMITING.** Immediately call a poison center, doctor, physician or other competent medical authority for medical advice.

### Inhalation

If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a local Poison Control Center, physician, or other competent medical authority for medical advice.

### Skin

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. A mild soap may be used to wash skin. Wash contaminated clothing before reuse. Immediately call a local Poison Control Center, doctor, physician or other competent medical authority for medical advice.

### Special Treatment / Other

None

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## SECTION 5: FIRE FIGHTING MEASURES

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### Flammable Properties

**Classification:** Non-flammable

**Flash Point:** None-to-boil

**Autoignition Temperature:** Not applicable

**Lower Flammable Limit:** Not applicable **Upper Flammable Limit:** Not applicable

### Specific Hazards

Product is water based and presents no unusual fire hazards. Product may react with chemically reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixtures in air.

### Extinguishing Media

Use extinguishing agents appropriate for controlling surrounding fire.

**Unsuitable:** None.

### Protection & Precautions for Firefighters

**Protective Equipment & Clothing:** Wear positive pressure self-contained breathing apparatus (SCBA). Structural



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firefighters protective clothing will only provide limited protection.

**Fire Fighting Guidance:** Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Containers can expand and explode under fire conditions due to vapor buildup. Always stay away from containers engulfed in fire.

**Hazardous Combustion Products:** Smoke, fumes, and oxides of carbon when taken to dryness.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### Land Spill

Absorb spillage to prevent material damage. Stop leak if you can do it safely. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spill, soak up with absorbent material and place in properly labeled containers for disposal. Neutralize residue with dilute acid and follow with a liberal covering of sodium bicarbonate or other acceptable drying agent.

### Water Spill

This is a water based product and will completely mix/dissolve in water making recovery difficult. This product is caustic and will raise the pH of surface waters. Check with local environmental regulatory agencies for reporting requirements.

See **SECTION 8** for **EXPOSURE CONTROLS** and **PERSONAL PROTECTION**.

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## SECTION 7: HANDLING & STORAGE

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### Handling

Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Do not cut, weld, or reuse empty container.

### Storage

Store locked up. Store in corrosive resistant container. Plastic is recommended. If storing in a metal container, it must be NON-ALUMINUM with a resistant inner liner (NOTE: flammable hydrogen gas may be generated if aluminum container and/or aluminum fittings are used). If secondary containers are used, plastic is recommended. Keep container tightly closed when not in use. Do not store near strong bases. Do not store in direct sunlight. Avoid storing above 120°F (49°C).

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## SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

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### Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

### Personal Protection

**Inhalation** A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use of an organic vapor mask or respirator is recommended.

**Skin** Wear chemical resistant gloves such as: rubber, nitrile, neoprene, or latex when skin contact is possible. Protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn depending on how the product is used. PPE should be cleaned thoroughly after each use.

**Eyes** Penetone recommends always wearing safety glasses as a minimum in any workplace. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or



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safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

**Additional Remarks**

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

**Occupational Exposure Limits**

<u>Component Name</u>	<u>Source</u>	<u>Value</u>	<u>Type</u>	<u>Notation</u>
Potassium hydroxide	ACGIH	2 mg/m <sup>3</sup>	Ceiling	
	NIOSH	2 mg/m <sup>3</sup>	Ceiling	

**SECTION 9: PHYSICAL & CHEMICAL PROPERTIES**

**Appearance:** clear water white liquid  
**Odor:** bland  
**Odor Threshold:** not determined  
**pH:** >13  
**Melting Point / Freezing:** about 25°F  
**Boiling Point / Boiling Point Range:** about 212°F  
**Flash Point:** not applicable  
**Evaporation Rate:** equal to water  
**Flammability:** not applicable  
**Lower Flammable Limit:** not applicable  
**Upper Flammable Limit:** not applicable  
**Explosive Properties:** not applicable  
**Vapor Pressure:** equal to water  
**Relative Vapor Density:** equal to water  
**Relative Density:** 1.06  
**Solubility (Water):** soluble in water  
**Partition Coefficient (K<sub>ow</sub>):** not determined  
**Auto-ignition temperature:** not applicable  
**Decomposition temperature:** not applicable  
**Viscosity:** less than 5 centipoise at room temperature

**SECTION 10: STABILITY & REACTIVITY**

**Reactivity**

Product will react with acids, giving off heat.

**Chemical Stability**

Stable.

**Hazardous Reactions**

Mixing with acids will give off heat and may cause splattering. Will react with some metals (see below) forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

**Conditions to Avoid**

Corrosive liquid. Do not store near strong bases.



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**Incompatible Materials**

Strong acids. Soft metals such as aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.

**Hazardous Decomposition Products**

Oxides of carbon when taken to dryness and burned.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**Product Summary**

This product contains potassium hydroxide which is corrosive to all tissues. Contact with skin and/or eyes, ingestion, or inhalation of spray mist may be corrosive. Possible effects include severe irritation, burns, and permanent damage to exposed tissues if immediate action is not taken..

**Acute Toxicity:**

**Dermal:** No data available

**Inhalation:** No data available

**Oral:** LD50 >4,000 mg/kg (rat) (estimated using additivity formula)

**Skin Corrosion/Irritation**

Corrosive. Causes skin burns. Prolonged or repeat skin exposures can result in dermatitis.

**Serious Eye Damage/Irritation**

Corrosive. Causes serious eye damage which can result in severe irritation, pain and burns, and permanent damage including blindness.

**Sensitization - Respiratory or Skin**

No data available for the product. Based upon components, product is not expected to be a respiratory or skin sensitizer.

**Germ Cell Mutagenicity**

No data available for the product. Based upon components, product is not expected to result in germ cell mutagenicity.

**Carcinogenicity**

No material in this product is listed by IARC, NTP, or OSHA as a carcinogen.

**Reproductive Toxicity**

No data for the product. Insufficient data for the components to evaluate. Given the product's tissue corrosiveness, other more pronounced effects would be seen making evaluation of reproductive toxicity unlikely.

**Specific Target Organ Effects - Single Exposure**

No data.

**Specific Target Organ Effects - Repeated or Prolonged Exposure**

Surfactants used in this product have produced kidney and liver effects and also were toxic to the fetus in lab animals at doses toxic to the mother. No birth defects were seen in the offspring.

**Aspiration Hazard**

Based upon available data, if swallowed, may pose a lung aspiration hazard during vomiting. Lung aspiration may result in chemical pneumonitis, pulmonary edema, and damage to lung tissue or death.

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**SECTION 12: ECOLOGICAL INFORMATION**

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**Product Summary**

This material is alkaline and may raise the pH of surface waters with low buffering capacity. Product should be



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considered moderately toxic to aquatic organisms.

**Ecotoxicity**

Freshwater Fish: LC50 100-500 mg/l (estimated using additivity formula)  
 Invertebrates: EC50 100-5000 (estimated using additivity formula)  
 Algae: ErC50 100-500 (estimated using additivity formula)

**Persistence and Degradability**

Potassium hydroxide will dissociate into its ionic form in the aquatic environment. Natural carbon dioxide will slowly neutralize it. The organic materials in this product are all readily biodegradable.

**Bioaccumulative Potential**

Bioaccumulation potential of the materials used in this product are low.

**Other Adverse Effects**

Potassium hydroxide has exhibited slight toxicity to terrestrial organisms.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Product is a D002 Corrosive Hazardous Waste under RCRA definitions. Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

**Note:** Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Appropriate hazardous waste designation is the responsibility of the user.

**SECTION 14: TRANSPORT INFORMATION**

**ID No.:** UN1814  
**Proper Shipping Name:** POTASSIUM HYDROXIDE, solution  
**Hazard Class:** 8  
**Packing Group:** II  
**Label:** 8  
**Marine Pollutant:** No  
**RQ:** 20,000 lbs (about 2,500 gallons) of product for potassium hydroxide  
**Special Precautions:** none

**SECTION 15: REGULATORY INFORMATION**

**TSCA**

The ingredients in this product are listed on the TSCA inventory.

**RCRA HAZARD CLASS**

D002 - Corrosive hazardous waste

**SARA 311/312 REPORTABLE HAZARD CATEGORIES:** Immediate (Acute) Health

**REPORTING REQUIREMENTS** (all quantities in pounds)

Component	CAS / 313 Code	Section 302 (EHS) TPQ	Section 304 EHS RQ	CERCLA RQ (1)	Section 313	CAA 112(r) TQ	CWA / OPA
Potassium hydroxide	1310-58-3			1,000	313		



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Product RQ for component				20,000 2,500 gal			
(1) Releases exceeding the RQ just be reported to the National Response Center, 800-424-8802 and may be subject to state and local reporting.							

**NEW JERSEY RIGHT-TO-KNOW INFORMATION**

This product contains water (CAS# 7732-18-5), potassium hydroxide (CAS# 1310-58-3), potassium salt of phosphate ester (CAS# not available), and ethoxylated nonylphenol (CAS# 127087-87-0).

**CALIFORNIA PROPOSITION 65 INFORMATION**

This product does not contain any chemicals recognized by the state of California to cause cancer and/or birth defects or reproductive harm.

**SCAQMD INFORMATION**

Is there a photochemically reactive material present? No  
 What is the % by volume of photochemically reactive material? 0  
 What is the VOC content? 0  
 What is the vapor pressure of VOC's? 0

**SECTION 16: OTHER INFORMATION**

**REVISION SUMMARY**

New GHS format

**SUPERSEDES ISSUE DATE**

June 27, 2007

**HAZARD RATING SYSTEMS:**

	<u>HMIS</u>	<u>NFPA</u>
HEALTH	3	3
FLAMMABILITY	0	0
REACTIVITY	0	0
	B	

**KEY**  
 4 = Severe  
 3 = Serious  
 2 = Moderate  
 1 = Slight  
 0 = Minimal

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER  
 FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

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