



Issue Date 17-Jun-2015

Revision Date 17-Jun-2015

Version 1

## 1. IDENTIFICATION

### Product identifier

Product Name CM-5004

### Other means of identification

Product Code CM-5004

UN/ID no. UN1760

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended Use Cleaning agent.

Uses advised against No information available

### Details of the supplier of the safety data sheet

#### Supplier Address

Chemical Methods, Inc.  
20338 Progress Drive  
Cleveland, OH 44149  
Telephone: (216)476-8400

### Emergency telephone number

Company Phone Number (216)476-8400

24 Hour Emergency Phone Number CHEMTREC (800)424-9300

## 2. HAZARDS IDENTIFICATION

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2
Corrosive to metals	Category 1

### Label elements

#### Emergency Overview

#### **Danger**

#### **Hazard statements**

Causes severe skin burns and eye damage

Suspected of damaging fertility or the unborn child

May be corrosive to metals



<b>Appearance</b> aqueous solution	<b>Physical state</b> liquid	<b>Odor</b> Slight
------------------------------------	------------------------------	--------------------

**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician  
 Specific treatment (see .? on this label)  
 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 or doctor/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

Harmful to aquatic life with long lasting effects

Unknown acute toxicity                      7.4% of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Chemical Name	CAS No.	Weight-%	Trade Secret
Tetrapotassium pyrophosphate	7320-34-5	3 - 7	*
Potassium hydroxide	1310-58-3	1 - 5	*
Diethylene glycol monomethyl ether	111-77-3	1 - 5	*
Tetrasodium ethylenediaminetetraacetate	64-02-8	1 - 5	*
Triethanolamine	102-71-6	0.1 - 1	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****Description of first aid measures**

<b>Eye contact</b>	Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids open to ensure flushing of the entire surface.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
<b>Inhalation</b>	Airborne concentrations of mist or spray may cause damage to the upper respiratory tract or lung tissue which could cause chemical pneumonia depending on the severity of exposure. If symptoms persist, call a physician.

**Ingestion** If swallowed, can cause severe burns and perforation of the mucous membranes of the mouth, throat, esophagus, and stomach. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Product is corrosive to all body tissues with which it comes in contact.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Contact with metals may evolve flammable hydrogen gas.

**Hazardous combustion products** During a fire, smoke may contain combustion products of varying composition which may be toxic and/or irritating. Combustion products may include oxides of nitrogen and carbon.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. Heavier than water. See Section 8 of the SDS for Personal Protective Equipment.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Large Spills: Dike area to contain spill and pump into properly labeled containers. Small Spills: Clean up with absorbent material and collect in suitable containers.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Use caution when combining with water; DO NOT add water to caustic; ALWAYS add caustic to water while stirring to minimize heat generation. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate

ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible and corrosion resistant. Observe good industrial hygiene practices.

#### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** Strong acids. Strong oxidizing agents. Contact with metals may evolve flammable hydrogen gas.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure Guidelines** Exposure limits are listed below, if they exist.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Triethanolamine 102-71-6	TWA: 5 mg/m <sup>3</sup>	-	-

#### Appropriate engineering controls

**Engineering Controls** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit guidelines. If there are no applicable exposure limit guidelines, general ventilation should be sufficient for most operations. Eyewash stations. Showers.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles). Face protection shield.

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Slight
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	No information available
<b>Color</b>	light yellow		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH	13		
Melting point / freezing point	< 0 °C / 32 °F		
Boiling point / boiling range	> 100 °C / 212 °F		
Flash point	> 100 °C / > 212 °F		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Relative density	1.188		
Water solubility	Miscible in water		
Solubility in other solvents	No information available		

<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

**10. STABILITY AND REACTIVITY****Reactivity**

Contact with metal may release flammable hydrogen gas. No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization** Hazardous polymerization does not occur.

**Conditions to avoid**

Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals.

**Incompatible materials**

Strong acids. Strong oxidizing agents. Contact with metals may evolve flammable hydrogen gas.

**Hazardous Decomposition Products**

Carbon monoxide.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

<b>Product Information</b>	Harmful if swallowed
<b>Inhalation</b>	Irritating to respiratory system.
<b>Eye contact</b>	Corrosive to the eyes and may cause severe damage including blindness.
<b>Skin contact</b>	Contact causes severe skin irritation and possible burns.
<b>Ingestion</b>	Harmful if swallowed. Can burn mouth, throat, and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Tetrapotassium pyrophosphate 7320-34-5	-	> 4640 mg/kg ( Rabbit )	-
Potassium hydroxide 1310-58-3	= 214 mg/kg ( Rat )	-	-
Tetrasodium ethylenediaminetetraacetate 64-02-8	= 1658 mg/kg ( Rat ) = 10 g/kg ( Rat )	-	-
Triethanolamine 102-71-6	= 4190 mg/kg ( Rat )	> 20 mL/kg ( Rabbit ) > 16 mL/kg ( Rat )	-

**Information on toxicological effects**

**Symptoms** Burning pain and severe corrosive skin damage. Permanent eye damage including

blindness could result.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Causes severe burns.  
**Serious eye damage/eye irritation** Risk of serious damage to eyes.  
**Sensitization** No information available.  
**Germ cell mutagenicity** No information available.  
**Carcinogenicity** No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Triethanolamine 102-71-6	-	Group 3	-	-

**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** Risk of serious damage to the lungs (by aspiration).

#### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)** 5,692.00  
**ATEmix (dermal)** 88,469.33

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

84.15 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Tetrapotassium pyrophosphate 7320-34-5	-	100: 96 h Oncorhynchus mykiss mg/L LC50	100: 48 h water flea mg/L EC50
Potassium hydroxide 1310-58-3	-	80: 96 h Gambusia affinis mg/L LC50 static	-
Diethylene glycol monomethyl ether 111-77-3	500: 72 h Desmodesmus subspicatus mg/L EC50	7500: 96 h Lepomis macrochirus mg/L LC50 static 7500: 96 h Lepomis macrochirus mg/L LC50 5741: 96 h Pimephales promelas mg/L LC50	500: 48 h Daphnia magna mg/L EC50
Tetrasodium ethylenediaminetetraacetate 64-02-8	1.01: 72 h Desmodesmus subspicatus mg/L EC50	41: 96 h Lepomis macrochirus mg/L LC50 static 59.8: 96 h Pimephales promelas mg/L LC50 static	610: 24 h Daphnia magna mg/L EC50
Triethanolamine 102-71-6	216: 72 h Desmodesmus subspicatus mg/L EC50 169: 96 h Desmodesmus subspicatus mg/L EC50	10600 - 13000: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Pimephales promelas mg/L LC50 static 450 - 1000: 96 h Lepomis macrochirus mg/L LC50 static	1386: 24 h Daphnia magna mg/L EC50

#### Persistence and degradability

No information available.

#### Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Potassium hydroxide 1310-58-3	0.65 0.83
Diethylene glycol monomethyl ether 111-77-3	-0.682
Triethanolamine 102-71-6	-2.53

**Other adverse effects** No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container.
<b>US EPA Waste Number</b>	D002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<b>Chemical Name</b>	<b>California Hazardous Waste Status</b>
Potassium hydroxide 1310-58-3	Toxic Corrosive

**14. TRANSPORT INFORMATION**

<b>DOT</b>	Regulated
<b>UN/ID no.</b>	UN1760
<b>Hazard Class</b>	Corrosive Liquid, n.o.s. contains potassium hydroxide
<b>Packing Group</b>	III

**15. REGULATORY INFORMATION****International Inventories**

<b>TSCA</b>	Does not comply
<b>DSL/NDL</b>	Does not comply
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Does not comply
<b>KECL</b>	Does not comply
<b>PICCS</b>	Does not comply
<b>AICS</b>	Does not comply

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydroxide 1310-58-3	1000 lb	-	-	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Potassium hydroxide 1310-58-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations****U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<b>NFPA</b>	Health hazards 2	Flammability 0	Instability 1	Physical and Chemical Properties -
<b>HMIS</b>	Health hazards 2	Flammability 0	Physical hazards 1	Personal protection X

Issue Date 17-Jun-2015

Revision Date 17-Jun-2015

**Revision Note**

No information available

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. While we believe the contained data is factual and those of qualified experts, the data should not be taken as a warranty or representation for which the company assumes legal responsibility. Any use of the data and information must be determined by the user to be in accordance with applicable federal, state, and local laws and regulations. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This product is intended for industrial use only.

**End of Safety Data Sheet**