



Suite 450  
One North Shore Center  
12 Federal Street  
Pittsburgh, PA 15212

# Safety Data Sheet

## KR-5129MGL

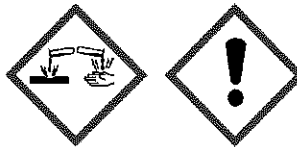
### 1. IDENTIFICATION

**Product name** KR-5129MGL  
**Description** Proprietary aqueous solution  
**Product class** Boiler Water  
**Supplier address** Suite 450  
One North Shore Center  
12 Federal Street  
Pittsburgh, PA 16212  
**Telephone numbers**  
Company Phone Number (412) 321-9800  
Emergency Telephone CHEMTREC 800-424-9200

### 2. HAZARDS IDENTIFICATION

**Hazard classification** Skin Corrosion, Category 1  
Serious Eye Damage, Category 1  
Specific Organ Toxicity: Single Exposure, Respiratory,  
Category 3  
**Signal word** Danger  
**Hazard statements** Causes severe skin burns and eye damage.  
Causes serious eye damage.  
May cause respiratory irritation.

**Pictograms of related hazards**



**Precautionary statements**

Prevention

Do not breathe fumes, mist, vapors, or spray.  
Wash skin thoroughly after handling.  
Wear protective gloves, protective clothing, eye protection, and face protection.  
Use only outdoors or in a well-ventilated area.

Response

Wash contaminated clothing before reuse.  
Specific measures:  
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately contact a POISON CENTER or health care provider.

IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or emergency shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately contact a POISON CENTER or health care provider.

Storage

Store locked up.

Store in a closed container.

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of in accordance with local, state, and federal regulations.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS #	Weight %
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	1-10
Tetrapotassium pyrophosphate (TKPP)	7320-34-5	1-10
Potassium hydroxide	1310-58-3	<2
Non-hazardous substances	Proprietary	>80

**4. FIRST-AID MEASURES**

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally to ensure complete rinsing. Remove contact lenses if present and easy to do, then resume rinsing. Get medical attention immediately.
<b>Skin contact</b>	Immediately remove all contaminated clothing. Rinse with copious amounts of water; use an emergency shower if available. Wash contaminated clothing before reuse.
<b>Ingestion</b>	If swallowed, DO NOT induce vomiting. Rinse mouth and get emergency medical attention. Do not give anything by mouth unless instructed to do so by a poison center or health care provider.
<b>Inhalation</b>	If inhaled, move victim to fresh air. Seek emergency medical attention if breathing is difficult; perform artificial respiration if breathing stops.
<b>Note to health care provider</b>	Esophageal corrosion may contraindicate the use of gastric lavage and/or activated charcoal.

**5. FIRE-FIGHTING MEASURES**

<b>Suitable extinguishing media</b>	Use extinguishing media appropriate for the surrounding fire.
<b>Unsuitable extinguishing media</b>	No information available

<b>Protective equipment and precautions for firefighters</b>	Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential. Use water to keep fire-exposed containers cool.
<b>Specific hazards</b>	Reaction with metals may evolve highly flammable hydrogen gas. Combustion may produce toxic gases.
<b>Hazardous combustion products</b>	Carbon oxides, nitrogen oxides, sulfur oxides, phosphorous oxides

<b>6. ACCIDENTAL RELEASE MEASURES</b>
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<b>Personal precautions</b>	Evacuate the area of all non-essential personnel. Do not touch spilled material without proper protective equipment. Ventilate the area and mitigate further release if it is safe to do so. Avoid contact with eyes.
<b>Methods for clean-up</b>	
<u>Small spills</u>	Contain spill and soak up with an inert absorbent material and place residues in a properly labeled container for disposal. Avoid discharge into sewer or surface water.
<u>Large spills</u>	Contain spill using trenches, diking, or absorption with an inert material (i.e. sand or earth). Reclaim spilled material into recovery or salvage drums or tank truck for proper disposal.

<b>7. HANDLING AND STORAGE</b>
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<b>Advice on safe handling</b>	Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash hands thoroughly after handling.
<b>Storage conditions</b>	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
<b>Suitable materials of construction</b>	Corrosion-resistant container; original container only is recommended.
<b>Unsuitable materials of construction</b>	Metals

<b>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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<b>Eye/face protection</b>	Chemical splash goggles, face shield
<b>Skin protection</b>	Chemical-resistant gloves and body-covering clothing
<b>Respiratory protection</b>	NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134) if airborne concentrations exceed published exposure limits.
<b>Engineering controls</b>	Adequate ventilation, eye-wash station, and emergency shower
<b>General hygiene considerations</b>	Do not eat, drink, or smoke while handling this product.

Chemical Name	OSHA PEL	ACGIH TLV
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	None established	None established
Tetrapotassium pyrophosphate (TKPP)	None established	None established
Potassium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Non-hazardous substances	None established	None established

### 9. PHYSICAL AND CHEMICAL PROPERTIES

pH	11.5-12.0
Appearance	Clear yellow liquid
Odor	Mild
Odor Threshold	No information available
Melting/freezing point	No information available
Initial boiling point/boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
VOC content	No information available
Specific gravity	1.105-1.185
Solubility	No information available
Partition coefficient n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available

### 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Stable under normal conditions of storage and handling.
<b>Hazardous polymerization</b>	Polymerization will not occur.
<b>Conditions to avoid</b>	Extreme temperatures, incompatibilities
<b>Incompatibilities</b>	Strong acids, oxidizers
<b>Hazardous decomposition products</b>	No known non-thermal decomposition hazards.

<b>11. TOXICOLOGICAL INFORMATION</b>
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**Likely routes of exposure**                      Skin, eyes, ingestion

**Acute toxicity*****2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)***

Parameter	Result
LD <sub>50</sub> , Oral (rat)	>4,000 mg/kg
LC <sub>50</sub> , Inhalation (rat)	1,979 mg/m <sup>3</sup> /4hr
Draize, Skin (rabbit)	Not irritating
Draize, Eye (rabbit)	Moderately irritating

***Tetrapotassium pyrophosphate (TKPP)***

Parameter	Result
LD <sub>Lo</sub> , Oral (rat)	4640 mg/kg
LD <sub>50</sub> , Dermal (rabbit)	>4,640 mg/kg

***Potassium hydroxide***

Parameter	Result
LD <sub>50</sub> , Oral (rat)	365 mg/kg
LD <sub>50</sub> , Oral (rat)	273 mg/kg
LD <sub>50</sub> , Dermal (rabbit)	1,260 mg/kg
Draize, Skin (rabbit)	Severely irritating
Draize, Eye (rabbit)	Severely irritating

**Acute symptoms and effects**

<b>Eye</b>	Severe eye irritation with serious damage including, but not limited to, tissue destruction, corneal opacification, and temporary or permanent blindness.
<b>Skin</b>	Skin irritation with or without pain, burning, itching, redness, and swelling. Symptoms may be exacerbated by open wounds, excoriations, rashes, or other skin breaches. Onset of symptoms may be delayed relative to exposure.
<b>Ingestion</b>	Gastrointestinal distress with or without nausea, vomiting, and diarrhea. May cause irritation or corrosion of the oral and esophageal mucosa.
<b>Inhalation</b>	Upper respiratory irritation with or without cough, watering of the eyes, and postnasal drip. Aspiration of liquid or vomit may cause severe respiratory distress, airway corrosion, and acute lung damage.
<b>Reproductive effects</b>	No information available
<b>Teratogenicity</b>	No information available
<b>Mutagenicity</b>	No information available
<b>Embryotoxicity</b>	No information available

<b>Sensitization to product</b>	No information available
<b>Synergistic products</b>	No information available
<b>Carcinogenicity</b>	No components have been identified as carcinogenic by OSHA, NTP, or IARC.
<b>Chronic</b>	No information available

## 12. ECOLOGICAL INFORMATION

### Aquatic toxicity

#### Product

Parameter	Result
96 hr LC <sub>50</sub> , Pimephales promelas (Fathead minnow)	1,248.96 mg/L
48 hr LC <sub>50</sub> , Daphnia magna	1,297.94 mg/L

<b>Persistence</b>	No information available
<b>Bioaccumulative potential</b>	No information available
<b>Mobility</b>	No information available

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal</b>	Dispose of in accordance with federal, state, and local regulations.
<b>RCRA status</b>	As sold, discarded product would be considered a RCRA hazardous waste based on the corrosive characteristics. The EPA hazardous waste number is D002.

## 14. TRANSPORT INFORMATION

### US Department of Transportation (DOT)

<b>UN Number</b>	UN3266
<b>Proper shipping name</b>	Corrosive liquid, basic, inorganic, n.o.s. (contains potassium hydroxide)
<b>Primary hazard class/division</b>	8
<b>Secondary hazard</b>	None
<b>Packing group</b>	III
<b>Label</b>	Corrosive

## 15. REGULATORY INFORMATION

<b>OSHA Hazard Communication Status</b>	Skin Corrosion, Category 1 Serious Eye Damage, Category 1 Specific Organ Toxicity: Single Exposure, Respiratory, Category 3
<b>EPA Registration Number</b>	Not applicable
<b>TSCA</b>	The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances

Inventory.

**CERCLA**EPA Hazardous Substances (40 CFR 302)

Chemical Name	Reportable Quantity (RQ)
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	None
Tetrapotassium pyrophosphate (TKPP)	None
Potassium hydroxide	1,000 lb
Non-hazardous substances	None
Product	50,000 lb (Notify the EPA of spills exceeding this amount.)

SARA Title III (Sections 302, 311, 312, and 313)

## Section 302 Extremely Hazardous Substances (40 CFR 355)

Chemical Name	CAS#	RQ	TPQ
None			

## Section 311 and 312 Health and Physical Hazards

Immediate	Delayed	Fire	Pressure	Reactivity
Yes	No	No	No	No

## Section 313 Toxic Chemicals (40 CFR 372)

Chemical Name	CAS Number	Percent by Weight
None		

**16. OTHER INFORMATION**

<b>HMIS Ratings</b>	Health—2; Flammability—0; Reactivity—0
<b>NFPA Ratings</b>	Health—2; Flammability—0; Reactivity—0; Special Hazard—None
<b>HMIS and NFPA Rating Scale</b>	Minimal—0; Slight—1; Moderate—2; Serious—3; Severe—4
<b>SDS Issue Date</b>	April 2, 2015
<b>Revision Date</b>	February 11, 2016, Section 12

*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. The information given is designed only as 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.*