



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

Safety Data Sheet

KR-122AKL

1. IDENTIFICATION

Product name KR-122AKL
Description Proprietary aqueous solution
Product class Cooling Water
Supplier address Suite 450
One North Shore Center
12 Federal Street
Pittsburgh, PA 15212
Telephone numbers
Company Phone Number (412) 321-9800
Emergency Telephone CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification Serious Eye Damage, Category 1
Signal word Danger
Hazard statements Causes serious eye damage.
Pictograms of related hazards



Precautionary statements

Prevention

Wear protective gloves, protective clothing, eye protection, and face protection.

Response

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	2809-21-4	10-20
Non-hazardous substances	Proprietary	>80

4. FIRST-AID MEASURES

Eye contact	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 if symptoms occur.
Skin contact	Remove contaminated clothing and wash the affected area with soap and water. Wash contaminated clothing before reuse.
Ingestion	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.
Inhalation	If inhaled, move victim to fresh air. Seek emergency medical attention if breathing is difficult; perform artificial respiration if breathing stops.
Note to health care provider	No specific information—treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Use extinguishing media appropriate for the surrounding fire.
Unsuitable extinguishing media	No information available
Protective equipment and precautions for firefighters	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.
Specific hazards	Combustion may produce toxic gases.
Hazardous combustion products	Carbon oxides, nitrogen oxides, sulfur oxides, phosphorous oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	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.
Methods for clean-up	
<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.

7. HANDLING AND STORAGE

Advice on safe handling	Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash hands thoroughly after handling.
Storage conditions	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Suitable materials of construction	No information available
Unsuitable materials of construction	No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/face protection	Chemical splash goggles, face shield
Skin protection	Chemical-resistant gloves and body-covering clothing
Respiratory protection	Observe published airborne exposure limits. NIOSH approved respirator should be used in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).
Engineering controls	Adequate ventilation, eye-wash station, and emergency shower
General hygiene considerations	Do not eat, drink, or smoke while handling this product.

Chemical Name	OSHA PEL	ACGIH TLV
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	None established	None established
Non-hazardous substances	None established	None established

9. PHYSICAL AND CHEMICAL PROPERTIES

pH	1.4-2.0
Appearance	Clear colorless to pale blue liquid
Odor	Mild
Odor Threshold	No information available
Melting/freezing point	17°F (-8.3°C)
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	1.110-1.190
Solubility	Complete
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

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

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure Skin, eyes, ingestion

Acute toxicity

1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)

Parameter	Result
LD ₅₀ , Oral (rat)	1,536-2,003 mg/kg
LD ₅₀ , Oral (mouse)	1,100 mg/kg
LD ₅₀ , Dermal (rabbit)	>6,000 mg/kg
Draize, Eye (rabbit)	Severe corrosion

Acute symptoms and effects

Eye	Eye irritation with or without pain, burning, itching, redness, discharge, and serious eye damage.
Skin	Skin irritation with or without pain, burning, itching, redness, and swelling. Symptoms may be exacerbated by open wounds, excoriations, rashes, or other skin breaches.
Ingestion	Gastrointestinal distress with or without nausea, vomiting, and diarrhea. May cause irritation or corrosion of the oral and esophageal mucosa.
Inhalation	Upper respiratory irritation with or without cough, watering of the eyes, and postnasal drip.
Reproductive effects	No information available

Teratogenicity	No information available
Mutagenicity	No information available
Embryotoxicity	No information available
Sensitization to product	No information available
Synergistic products	No information available
Carcinogenicity	No components have been identified as carcinogenic by OSHA, NTP, or IARC.
Chronic	Repeat, long-term, or high-dose exposure to HEDP has been implicated in dysregulation of blood calcium levels and shown adverse effects on bone mineralization.

12. ECOLOGICAL INFORMATION**Aquatic toxicity****Product**

Parameter	Result
96 hr LC ₅₀ , Bluegill sunfish	>10,000 mg/L
96 hr LC ₅₀ , Rainbow trout	4,900 mg/L
48 hr EC ₅₀ , Daphnia magna	2,800 mg/L

Persistence	No information available
Bioaccumulative potential	No information available
Mobility	No information available

13. DISPOSAL CONSIDERATIONS

Disposal	Dispose of in accordance with federal, state, and local regulations.
RCRA status	Discarded product, as sold, would not be considered a RCRA Hazardous Waste.

14. TRANSPORT INFORMATION**US Department of Transportation (DOT)**

UN Number	UN3265
Proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (contains 1-Hydroxyethylidene-1,1-diphosphonic acid)
Primary hazard class/division	8
Secondary hazard	None
Packing group	III
Label	Corrosive

15. REGULATORY INFORMATION

OSHA Hazard Communication Status Serious Eye Damage, Category 1

EPA Registration Number Not applicable

TSCA The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLAEPA Hazardous Substances (40 CFR 302)

Chemical Name	Reportable Quantity (RQ)
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	None
Non-hazardous substances	None

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

HMIS Ratings Health—1; Flammability—0; Reactivity—0

NFPA Ratings Health—1; Flammability—0; Reactivity—0;
Special Hazard—None

HMIS and NFPA Rating Scale Minimal—0; Slight—1; Moderate—2; Serious—3;
Severe—4

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