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 12 Federal Street  
 Pittsburgh, PA 15212

**KR-122JDL**

**MATERIAL SAFETY DATA SHEET**

FOR EMERGENCY ASSISTANCE  
 CALL: 1-800-424-9300 CHEMTREC

FOR ADDITIONAL INFORMATION  
 CALL: 412-321-9800

**SECTION 1: PRODUCT IDENTIFICATION**

PRODUCT NAME: **KR-122JDL**  
 CHEMICAL DESCRIPTION: Antiscalent/Corrosion Inhibitor  
 PRODUCT CLASS: Water Treatment  
 VERSION: 7-12-12

**SECTION 2: INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Weight Percent	OSHA PEL	ACGIH TLV
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)*	2809-21-4	<5	None established	None established
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)*	37971-36-1	<5	None established	None established
Sodium benzotriazole	15217-42-2	<3	None established	None established

\*Component is present as its sodium salt in this formulation.

**SECTION 3: HAZARDS IDENTIFICATION**

\*\*\*\*\*EMERGENCY OVERVIEW\*\*\*\*\*

**WARNING!**  
 May cause eye, skin, and respiratory tract irritation.

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PRIMARY ROUTES OF ENTRY: Eye contact, skin contact, ingestion, and inhalation of product mists

TARGET ORGANS: Eye, skin, and mucous membranes

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Unknown

**POTENTIAL HEALTH EFFECTS:**

**EYE CONTACT:** This product may cause eye irritation upon contact with the eye.

**SKIN CONTACT:** Exposure to this product may cause irritation of the skin. This product is not expected to be absorbed through the skin in harmful amounts or to produce an allergic skin reaction.

**INGESTION:** Ingestion may cause digestive tract irritation. This product would be expected to have a low toxicity.

**INHALATION:** Breathing mists of this product may be irritating to the respiratory system.

**SUBCHRONIC, CHRONIC:** No applicable information was found concerning any potential health effects resulting from subchronic or chronic exposure to the product.

Some blood effects have been produced by HEDP in chronic feeding studies with rats. Numerous publications in the scientific literature discuss the effects of HEDP related to bone resorption in tissue and cell culture, and in animals. The effects of HEDP related to bone mineralization, calcium absorption, and metabolism of calcium and phosphate have also been evaluated.

**CARCINOGENICITY:**

NTP: No ingredients listed in this section

IARC: No ingredients listed in this section

OSHA: No ingredients listed in this section

**SECTION 4: FIRST AID MEASURES**

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids to ensure complete rinsing. Seek medical aid.

**SKIN CONTACT:** Immediately wash the affected area with soap and water. Remove contaminated clothing. Seek medical aid if symptoms occur. Wash clothing before reuse.

**INGESTION:** If swallowed, do NOT induce vomiting. Give large quantities of water. Seek medical aid. Never give anything by mouth to an unconscious person.

**INHALATION:** If inhalation occurs, remove the victim to fresh air. If the victim is not breathing, give artificial respiration. If breathing is difficult, have a trained medical person give oxygen. Seek medical aid if symptoms occur.

**SECTION 5: FIRE-FIGHTING MEASURES**

FLASHPOINT: >200 °F (>93 °C) [TCC]

*This product is not by definition a "flammable liquid" or a "combustible liquid".*

LOWER FLAMMABLE LIMIT: Not available

UPPER FLAMMABLE LIMIT: Not available

AUTO-IGNITION TEMPERATURE: Not available

EXTINGUISHING MEDIA: Use extinguishing media appropriate for the surrounding fire.

FIRE-FIGHTING INSTRUCTIONS: Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential.

FIRE & EXPLOSION HAZARDS: Product emits toxic gases under fire conditions.

DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce oxides of carbon, nitrogen, sulfur, phosphorus, and sodium.

NFPA RATINGS: Health = 1 Flammability = 0 Reactivity = 0 Special Hazard = None

Hazard rating scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

**SECTION 6: ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Wear appropriate personal protective equipment, contain the spill, recover as much liquid as possible, collect the residue onto an inert absorbent, and place the used absorbent into a suitable container. U.S. Regulations (CERCLA) require the reporting of spills and releases to soil, water, and air in excess of reportable quantities. The toll free number for the U.S. Coast Guard National Response Center is 800-424-8802.

Dispose of used absorbent and recovered liquid, if unusable, according to federal, state, and local regulations.

**SECTION 7: HANDLING AND STORAGE****HANDLING:**

Avoid contact with eyes, skin, and clothing.

Avoid breathing vapor or mist.

Use with adequate ventilation.

Wash thoroughly after handling.

Keep containers closed when not in use.

STORAGE: Store in a cool, well-ventilated area away from incompatible materials.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

## PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Chemical splash goggles

SKIN PROTECTION: Chemical resistant gloves and protective clothing

RESPIRATORY PROTECTION: If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134)

ENGINEERING CONTROLS: Use local and/or general exhaust ventilation to maintain airborne concentrations below exposure limits.

WORK PRACTICES: An eye wash station and safety shower should be accessible in the immediate area of use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

pH: 10.0 to 11.0

SPECIFIC GRAVITY: 1.05-1.15 g/mL

SOLUBILITY IN WATER: Complete

BOILING POINT: Not available

FREEZING POINT: Not available

VAPOR PRESSURE: Not available

VAPOR DENSITY: Not available

APPEARANCE AND ODOR: Clear, very pale yellow to colorless liquid

**SECTION 10: STABILITY AND REACTIVITY**

CHEMICAL STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: No specific information

INCOMPATIBILITIES: Strong oxidizers and acids

DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce oxides of carbon, nitrogen, sulfur, phosphorus, and sodium.

**SECTION 11: TOXOLOGICAL INFORMATION**

## ON INGREDIENTS:

Test Material	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
1-Hydroxyethylidene-1,1-diphosphonic acid	2,400 mg/Kg (60% solution)	>7,940 mg/Kg (60% solution)	Not available
2-Phosphono-1,2,4-butanetricarboxylic acid	>6,500 mg/Kg	Not available	Not available
Anionic copolymer	>1,400 mg/Kg	>560 mg/Kg	Not available
Sodium benzotriazole	560 mg/Kg	>2,000 mg/Kg	1,910 mg/m <sup>3</sup> /3H

**SECTION 12: ECOLOGICAL INFORMATION**

## ON PRODUCT:

Test Material	Aquatic Toxicity Data
Similar Product	48 hr LC50 (Daphnia magna): 2,766 mg/L 96 hr LC50 (Fathead minnow): 3,469 mg/L

**SECTION 13: DISPOSAL**

RCRA STATUS: Discarded product, as sold, would not be considered a RCRA Hazardous Waste.

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

**SECTION 14: TRANSPORTATION**

## DOT CLASSIFICATION:

Proper Shipping Name: Not applicable  
 Primary Hazard Class/Division: Not restricted  
 UN Number: Not applicable  
 Packing Group: Not applicable  
 Label: None

**SECTION 15: REGULATORY INFORMATION**

OSHA Hazard Communication Status: Hazardous

TSCA: 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                      CERCLA Reportable Quantity (RQ)  
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

**SECTION 16: OTHER INFORMATION**

HMIS RATINGS:    Health = 1    Flammability = 0    Reactivity = 0

Hazard Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

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