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KR-122QRL

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-122QRL**
 CHEMICAL DESCRIPTION: Aqueous blend of phosphate, dispersant, azole, and phosphonate
 PRODUCT CLASS: Cooling Water
 VERSION: 7-11-12

SECTION 2: INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	OSHA PEL	ACGIH TLV
2-Phosphonobutane-1,2,4-tricarboxylic acid (PBTC)	37971-36-1	1-10	None established	None established
Anionic copolymer, as active acid	Proprietary	1-10	None established	None established
Phosphoric acid	7664-38-2	1-10	TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³

SECTION 3: HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

Clear colorless liquid.
WARNING!
 May cause eye irritation and burns.
 May cause skin irritation.
 Harmful if swallowed.
 Product mist may irritate the respiratory tract.

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

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Conditions of the eye, skin, and respiratory tract may be aggravated by overexposure to this product.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Contact may cause eye irritation and burns experienced as blinking, tearing, redness, swelling, pain, and/or tissue damage.

SKIN CONTACT: Contact may cause irritation with redness and pain.

INGESTION: Swallowing this product can cause irritation or burns of the mouth, throat, esophagus, and stomach. Abdominal pain, nausea, vomiting, and diarrhea may occur.

INHALATION: This product does not pose an inhalation hazard unless mists are generated and inhaled. Inhalation of product mist may cause respiratory tract irritation.

SUBCHRONIC, CHRONIC: No information is available for this product. Information on components follows:

Chronic or repeated exposure to PBTC could result in skin irritation with itching, reddening, swelling, rash, and scaling.

Prolonged or repeated skin exposures to phosphoric acid solutions can result in dermatitis.

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 occasionally to ensure complete rinsing. Seek medical aid immediately.

SKIN CONTACT: in a timely manner, remove contaminated clothing and wash the affected area thoroughly with plenty of soap and water. If irritation occurs, seek medical aid.

INGESTION: If swallowed, do NOT induce vomiting. If victim is conscious and alert, rinse out mouth with water and give two glasses (16 oz) of water to drink. Seek medical aid immediately. Never give anything by mouth to an unconscious person.

INHALATION: If inhalation occurs, remove victim to fresh air. If victim breathing stops, give artificial respiration. If breathing is difficult, have a trained medical person administer oxygen. Get medical attention.

INHALATION: If inhalation occurs, remove the victim to fresh air. If breathing stops, give artificial respiration. If breathing is difficult, have a trained medical person give oxygen. Seek medical aid immediately.

SECTION 5: FIRE-FIGHTING MEASURES

FLASHPOINT: None

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

LOWER FLAMMABLE LIMIT: Not applicable

UPPER FLAMMABLE LIMIT: Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: Use extinguishing media that is 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 may emit toxic gases under fire conditions. Contact with metals can generate flammable hydrogen gas.

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

NFPA RATINGS: Health = 2 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

PERSONAL PRECAUTIONS: Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Ventilate the spill area. Keep unnecessary and unprotected people away from the spill site. Stop or reduce any leaks if it is safe to do so. Notify appropriate government, occupational health and safety, and environmental authorities.

METHODS FOR CLEAN-UP:

Small spills: Soak up spill with an inert absorbent material. Place residues in a suitable, covered, properly labeled container. Wash the affected area.

Large spills: Contain liquid using an inert absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS: Do not discharge product directly into lakes, ponds, streams, waterways, or public water supplies.

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

Avoid contact with eyes, skin, and clothing.

Avoid breathing mist.

Use with adequate ventilation.

Wash thoroughly after handling.

Do not take internally.

Keep containers closed when not in use.

Ensure that containers are properly labeled.

Since empty containers retain product residues (vapors, liquid), observe all warnings and precautions listed for the product.

Have emergency equipment (for fires, spills, leaks, etc.) readily available.

STORAGE:

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

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE/FACE PROTECTION: Chemical splash goggles. Also wear a faceshield where splashing is possible.

SKIN PROTECTION: Chemical resistant gloves and clean body covering clothing

RESPIRATORY PROTECTION: Respiratory protection is not normally needed. If significant mists, vapors, or aerosols are generated, an approved respirator is recommended. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, and maintenance and inspection.

ENGINEERING CONTROLS: A system of local and/or general exhaust is recommended to keep employee exposures below irritating levels or airborne exposure limits, whichever is lower. Local exhaust ventilation is preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the latest edition of the ACGIH document *Industrial Ventilation, A Manual of Recommended Practices* for details.

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: 1.4-2.0

SPECIFIC GRAVITY: 1.025-1.075 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, colorless liquid with no odor

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Avoid temperature extremes and incompatibles.

INCOMPATIBILITY: Strong oxidizers and strong bases

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

SECTION 11: TOXICOLOGICAL INFORMATION

ON INGREDIENTS:

Test Material	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
tricarboxylic acid (PBTC)	>6,500 mg/Kg 17,400 mg/Kg*	>4,000 mg/Kg	>3,000 mg/m ³ /4H*
Anionic copolymer	>1,400 mg/Kg	>560 mg/Kg	Not available
Phosphoric acid, 75%	4,400 mg/Kg	>3,160 mg/Kg	Not available

*Neutralized form tested with results recalculated for 50% acid form

SECTION 12: ECOLOGICAL INFORMATION

ON INGREDIENTS:

Test Material	Aquatic Toxicity Data
1,2,4-tricarboxylic acid (PBTC)	48 hr EC50 (Daphnia magna): >300 mg/L* 48 hr LCo (Rainbow trout): 5,300 mg/L 96 hr LC50 (Rainbow trout): >1,000 mg/L*
Anionic copolymer	48 hr LC50 (Daphnia magna): 2,800 mg/L 96 hr LC50 (Bluegill sunfish): >10,000 mg/L 96 hr LC50 (Rainbow trout): 4,900 mg/L
Phosphoric acid	96 hr LC50 (Mosquito fish): 138 mg/L

*Neutralized form tested with results recalculated for 50% acid form

SECTION 13: DISPOSAL

RCRA STATUS: Discarded product, as sold, would be considered a RCRA Hazardous Waste based on the characteristic of corrosivity. The EPA Hazardous Waste Number is D002.

DISPOSAL: Dispose of in accordance with local, state, and federal regulations. Prevent entry into sewers or waterways.

SECTION 14: TRANSPORTATION

DOT CLASSIFICATION:

Proper Shipping Name: Corrosive liquid, n.o.s. (contains phosphoric acid)

Primary Hazard Class: 8

ID Number: UN 1760

Packing Group: III

Label: Corrosive

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):

<u>Chemical Name</u>	<u>CERCLA Reportable Quantity (RQ)</u>
Phosphoric acid	5,000 lb
Product	181,620 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):

<u>Chemical Name</u>	<u>CAS#</u>	<u>RQ</u>	<u>TPQ</u>
None			

Section 311 and 312 Health and Physical Hazards:

<u>Immediate</u>	<u>Delayed</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactivity</u>
yes	no	no	no	no

Section 313 Toxic Chemicals (40 CFR 372):

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent by Weight</u>
None		

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health = 2 Flammability = 0 Reactivity = 0

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

The preceding information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change, and the conditions of handling and use or misuse are beyond our control, Kroff Chemical Company, Inc. makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein, and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.