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KR-107EVL

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-107EVL
CHEMICAL DESCRIPTION: Aqueous blend of dispersants and phosphonate
PRODUCT CLASS: Specialty
VERSION: 5-7-10

SECTION 2: INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	OSHA PEL	ACGIH TLV
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	2809-21-4	1-10	None established	None established
Anionic copolymer	Proprietary	1-10	None established	None established
Anionic polymer	Proprietary	1-10	None established	None established

SECTION 3: HAZARDS IDENTIFICATION

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

Clear colorless liquid.

WARNING!

May cause eye irritation and burns.

May cause skin irritation.

Ingestion may cause irritation of mucous membranes and g.i. upset.

If mists are generated and inhaled, respiratory tract irritation may occur.

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

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin conditions may be aggravated by prolonged or repeated exposures. Persons with sensitive airways (e.g. asthmatics) may react if vapors are generated and inhaled.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Contact may cause eye irritation and burnis with tearing, redness, swelling, pain, and/or tissue damage.

SKIN CONTACT: Contact may cause skin irritation.

INGESTION: Ingestion may cause irritation of the mucous membranes of the mouth, throat, esophagus, and stomach. Nausea and vomiting may occur.

INHALATION: This product is not expected to present an inhalation hazard. If product mists, aerosols, or vapors are generated and inhaled, respiratory tract irritation may occur. Dizziness, headache, nausea, and flu-like symptoms may also occur. Persons with sensitive airways (e.g. asthmatics) may react to inhaled mists.

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

Some blood effects have been produced by HEDP in chronic feeding studies with rats. A product containing 60% HEDP was administered to beagle dogs at dietary concentrations as high as 10,000 ppm for 90 days with no adverse hematological, biochemical, or histopathological effects.

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 occasionally to ensure complete rinsing. Get medical attention immediately.

SKIN CONTACT: In a timely manner, remove contaminated clothing and wash skin thoroughly with plenty of soap and water. Get medical attention if symptoms occur. Wash clothing before reuse.

INGESTION: If swallowed, do NOT induce vomiting. If victim is conscious and alert, rinse out mouth with water and give large quantities of water to drink. Get medical attention. Never give anything by mouth to an unconscious person.

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

SECTION 5: FIRE-FIGHTING MEASURES

FLASHPOINT: None

This product is not by definition a "flammable liquid" or a "combustible liquid", however, if all of the water is boiled away, the remaining organics can burn.

LOWER FLAMMABLE LIMIT: Not applicable

UPPER FLAMMABLE LIMIT: Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

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, phosphorus, sodium, nitrogen, and sulfur. Aldehydes and other products of incomplete combustion may be produced.

NFPA CODES:

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. Contact an approved waste hauler for disposal of contaminated recovered material. 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

HAND PROTECTION: Chemical resistant gloves (PVC or nitrile rubber)

SKIN PROTECTION: Chemical resistant gloves and clean body covering clothing

RESPIRATORY PROTECTION: Respiratory protection is not normally needed. If 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 in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

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: 1.0-2.5

SPECIFIC GRAVITY: 1.005-1.045 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 to liquid with a mild odor or no odor

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Incompatibles

INCOMPATIBILITIES: Alkalis and oxidizers

DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce oxides of carbon, phosphorus, sodium, nitrogen, and sulfur. Aldehydes and other products of incomplete combustion may be produced.

SECTION 11: TOXICOLOGICAL 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 (80% solution)	Not available
Anionic copolymer	>1,400 mg/Kg	>550 mg/Kg	Not available
Anionic polymer, sodium salt	>1,450 mg/Kg	>5,800 mg/Kg	Not available

SECTION 12: ECOLOGICAL INFORMATION**ON INGREDIENTS:**

Test Material	Aquatic Toxicity Data
* 1-Hydroxyethylidene-1,1-diphosphonic acid	48 hr LC50 (Daphnia magna): 527 mg/L 96 hr LC50 (Bluegill sunfish): 868 mg/L 96 hr LC50 (Rainbow trout): 368 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/LL
Anionic polymer, sodium salt	48 hr EC50 (Daphnia): 1,509 mg/L 96 hr LC50 (Rainbow trout): 1,182 mg/L

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 product from entering streams or lakes.

SECTION 14: TRANSPORTATION**DOT CLASSIFICATION:**

Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.
(contains 1-hydroxyethylidene-1,1-diphosphonic acid)

Primary Hazard Class/Division: 8

UN Number: UN 3265

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>
None	

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.