



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

Safety Data Sheet

KR-131SRL

1. IDENTIFICATION

Product name	KR-131SRL
Description	Proprietary aqueous solution
Product class	Boiler Water
Supplier address	Suite 450 One North Shore Center 12 Federal Street Pittsburgh, PA 15212
Telephone numbers	
<u>Company Phone Number</u>	(412) 321-9800
<u>Emergency Telephone</u>	CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification	Corrosive to Metals, Category 1 Eye Irritation, Category 2B
Signal word	Warning
Hazard statements	May be corrosive to metals. Causes eye irritation.

Pictograms of related hazards



Precautionary statements

Prevention

Keep only in original packaging.
Wash skin thoroughly after handling.

Response

Absorb spillage to prevent material damage.
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.
If eye irritation persists: Get medical attention.

Storage

Store in a corrosive-resistant container or container with a resistant inner liner.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	1–10
Non-hazardous substances	Proprietary	>90

4. FIRST-AID MEASURES

Eye contact	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.
Skin contact	Immediately remove all contaminated clothing. Rinse with copious amounts of water; use an emergency shower if available. Wash contaminated clothing before reuse.
Ingestion	If swallowed, DO NOT induce vomiting. 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	Stay upwind of the fire. Full protective equipment including self-contained breathing apparatus should be used. Use water to cool closed containers. Contain water runoff if possible.
Specific hazards	Combustion may produce toxic gases.
Hazardous combustion products	Carbon oxides, nitrogen 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
Skin protection	Chemical-resistant gloves and body-covering clothing
Respiratory protection	Respiratory protection is not normally required. A respirator is recommended if significant mists, vapors, or aerosols are generated.
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
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	None established	None established
Non-hazardous substances	None established	None established

9. PHYSICAL AND CHEMICAL PROPERTIES

pH	1.0-2.0
Appearance	Clear colorless 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	1.115-1.195

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	Freezing temperatures, incompatibilities
Incompatibilities	Strong oxidizers
Hazardous decomposition products	No known non-thermal decomposition hazards.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure Skin, eyes, ingestion

Acute toxicity

2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)

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

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.
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	No information available

12. ECOLOGICAL INFORMATION

Aquatic toxicity

2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)

Parameter	Result
48 hr LC ₅₀ , Leuciscus idis	>500 mg/L
24 hr EC ₅₀ , Daphnia magna	747 mg/L
48 hr LC ₀ , Rainbow trout	3,440 mg/L
72 hr LC ₀ , Leuciscus idus	>2,000 mg/L
14 day NOEC, Zebra fish	>1,042 mg/L
21 day LC ₅₀ , Daphnia magna	>1,071 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 2-Phosphono-1,2,4-butanetricarboxylic acid)

Primary hazard class/division 8

Secondary hazard

Packing group III

Label Corrosive

15. REGULATORY INFORMATION

OSHA Hazard Communication Status Corrosive to Metals, Category 1
Eye Irritation, Category 2B

EPA Registration Number Not applicable

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	Reportable Quantity (RQ)
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	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—2; Flammability—0; Reactivity—0
NFPA Ratings Health—2; Flammability—0; Reactivity—0
HMIS/NFPA Rating Scale Minimal—0; Slight—1; Moderate—2; Serious—3; Severe—4
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