



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

Safety Data Sheet

KR-B4001

1. IDENTIFICATION

Product name KR-B4001
Description Water and Wastewater treatment coagulant
Product class Waste treatment
Supplier address Suite 450
One North Shore Center
12 Federal Street
Pittsburgh, PA 16212
Telephone numbers
Company Phone Number (412) 321-9800
Emergency Telephone CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

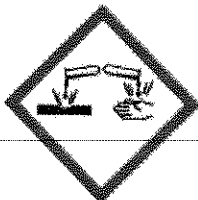
OSHA Regulatory Status This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazard classification Skin Corrosion, Category 2
Eye Irritation, Category 2
Corrosive to Metals, Category 1

Signal word Warning

Hazard statements Causes skin irritation
Causes serious eye irritation
May be corrosive to metals

Pictograms of related hazards



Precautionary statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Keep only in original container

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

IF ON SKIN (or hair): Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before reuse

Absorb spillage to prevent material damage

Storage

Store in corrosive resistant container with a resistant inner liner

Disposal

Dispose of contents or container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
Trade secret	PROPRIETARY	45-55*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Eye contact

Remove contact lenses if worn. Immediately flush with plenty of water for at least 20 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Seek medical advice immediately.

Skin contact

Immediately wash thoroughly with soap and water, remove contaminated clothing and shoes. Wash clothing before reuse. Get medical advice/attention if irritation should develop.

Ingestion

Do NOT induce vomiting. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air. If breathing is difficult give oxygen. Call a physician.

Most important symptoms and effect, both acute and delayed

Possible eye, skin, and respiratory tract irritation or burns.

Chronic Effects: May aggravate existing skin, eye, and lung conditions. Persons with kidney disorders have an increased risk from exposure based on general information found on aluminum salts.

Indication of any immediate medical attention and special treatment needed

Note to physicians Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water Spray, Carbon Dioxide, Foam, Dry Chemical.
Unsuitable extinguishing media	No information available
Protective equipment and precautions for firefighters	Product is a water solution and nonflammable. In a fire, this product may build up pressure and rupture a sealed container; cool exposed containers with water spray. Use self-contained breathing apparatus in confined areas; avoid breathing mist or spray. Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.
Specific hazards	May produce hazardous fumes or hazardous decomposition products.
Hazardous combustion products	May produce hazardous fumes or hazardous decomposition products.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear adequate personal protective clothing and equipment. Approved breathing apparatus may be necessary.
Methods for clean-up	
<u>Small spills</u>	Prevent further leakage or spillage if safe to do so. Build dikes as necessary to contain flow of large spills.
<u>Large spills</u>	Clear spills immediately. Contain large spill and remove using a vacuum truck. Soak up small spills with inert absorbent material and place in a labeled waste container for disposal. Ventilate area of leak or spill. Spills of solution are extremely slippery so all residue must be removed promptly.

7. HANDLING AND STORAGE

Advice on safe handling	Keep container closed when not in use. Keep away from heat and open flame. Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, gloves, and protective clothing when handling. Wash thoroughly after handling. Avoid breathing mist or vapors. Use with adequate ventilation and employ respiratory protection where mist or spray may be generated. Do not take internally. FOR INDUSTRIAL USE ONLY.
Storage conditions	Store in a cool, dry place away from heat.
Suitable materials of construction	Do not store in unlined metal containers. Product may slowly corrode iron, brass, copper, aluminum, mild steel, and stainless steel.
Incompatible products	Alkalis

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters	Exposure Guidelines: This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Eye/face protection	Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).
Skin protection	Standard work clothing and work shoes.
Respiratory protection	If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.
Engineering controls	Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.
General hygiene considerations	Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

pH	2.0 – 3.0
Appearance	Colorless to yellow
Odor	No appreciable odor

Odor Threshold	No information available
Melting/freezing point	No information available
Initial boiling point/boiling range	No information available
Flash point	No applicable
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	No applicable
Vapor pressure	No information available
Vapor density	No information available
VOC content	No information available
Specific gravity	1.34–1.36
Solubility	Soluble below pH 4
Partition coefficient n-octanol/water	No information available
Auto-ignition temperature	No applicable
Decomposition temperature	No information available
Viscosity	10-20 cP

10. STABILITY AND REACTIVITY

Reactivity	No data available.
Chemical stability	Stable under normal conditions of storage and handling.
Hazardous polymerization	No
Conditions to avoid	None
Incompatibilities	Alkalis
Hazardous decomposition products	Thermal decomposition may release toxic and/or hazardous gases such as Cl ₂ and HCl.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure	Skin, eyes, ingestion, inhalation
Acute toxicity	

Test Material	Parameter	Result
Product	LD ₅₀ , Oral (rat)	---
	LD ₅₀ , Dermal (rabbit)	---
	LD ₅₀ , Inhalation (rabbit)	---
Trade secret ingredient	LD ₅₀ , Oral (rat)	5000 mg/kg

	LD ₅₀ , Dermal (rabbit)	---
	LD ₅₀ , Inhalation (rabbit)	---

Acute symptoms and effects

Eye	May cause serious eye irritation.
Skin	Irritating to skin.
Ingestion	May cause irritation of the mouth, throat and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Inhalation	Inhalation of mist or spray may irritate respiratory tract irritation.
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	This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.
Chronic	No information available

Numerical measures of toxicity – Product information

The following values are calculated based on chapter 3.1 of the GHS document
 ATEmix (oral) 10537 mg/kg

12. ECOLOGICAL INFORMATION

Test Material	Parameter	Result
Product	48 hr LC50 (Daphnia magna): mg/L	793.7
	96 hr LC50 (Pimephales promelas):	771.11 mg/L
	Algae/aquatic plants	--
Trade secret ingredients	LC50 (48 h static) (Leucisous idus melanotus)	1460 – 1500 mg/L

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

PBT and vPvB assessment	No information available
Other information	No other ecological studies have been carried out on this product.

13. DISPOSAL CONSIDERATIONS

Disposal	Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations. Since empty containers retain product residue, follow label warnings even after container is emptied.
-----------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

14. TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number	UNB3264
Proper shipping name	Corrosive liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)
Primary hazard class/division	8
Packing group	III
ERG Number	154

TDG (Canadian) Classification

UN Number	UN3264
Proper shipping name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)
Primary hazard class/division	8
Packing group	III
Label	Corrosive

IMDG Classification

UN Number	UN3264
Proper shipping name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum chloride solution)
Hazard class	8
EmS	F-A; S-B
Packing group	III

IATA/ICAO Classification

UN Number	UN3264
Proper shipping name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum chloride solution)

Primary hazard class/division 8
Packing group III
ERG Code 8L
Harmonized Tariff Number 3824.90

15. REGULATORY INFORMATION

International Inventories

TSCA (United States)

All ingredients are on the inventory or exempt from listing

Australia (AICS)

All ingredients are on the inventory or exempt from listing

Canada (DSL)

All ingredients are on the inventory or exempt from listing

Canada (NDSL)

None of the ingredients are on the inventory.

China (IECSC)

All ingredients are on the inventory or exempt from listing

EINECS (European Inventory of Existing Chemical Substances)

All ingredients are on the inventory or exempt from listing

ELINCS (European List of Notified Chemical Substances)

None of the ingredients are on the inventory.

ENCS (Japan)

All ingredients are on the inventory or exempt from listing

South Korea (KECL)

All ingredients are on the inventory or exempt from listing

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - China Inventory of Existing Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Che

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

U.S. Federal Regulations**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

None

16. OTHER INFORMATION

HMIS Ratings	Health—2; Flammability—0; Reactivity—0
NFPA Codes	Health—2; Flammability—0; Reactivity—0; Special Hazard—None
Hazard Rating Scale	Minimal—0; Slight—1; Moderate—2; Serious—3; Severe—4
SDS Issue Date	January 13, 2016
Revision Date	Version 2

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.