



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

Safety Data Sheet

KR-59CTL

1. IDENTIFICATION

Product name	KR-59CTL
Description	Boiler Water Treatment
Product class	Water treatment
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 1-800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Health Hazards	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
Signal word	Warning
Hazard statements	H319 - Causes serious eye irritation. H315 - Causes skin irritation.

Pictograms of related hazards



Precautionary Statement

Prevention

Wear protective gloves. Wear eye or face protection.
Wear protective clothing. Wash hands thoroughly after handling.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.

Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental information	Do not taste or swallow. Wash thoroughly after handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS Number	Weight %
Tannic acid	1401-55-4	15-40
EDTA Disodium Salt	6381-92-6	5-15
Sodium hydroxide	1310-73-2	< 1

4. FIRST-AID MEASURES

Eye contact	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes.
Skin contact	Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes.
Ingestion	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Inhalation	If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Causes serious eye damage Adverse symptoms may include the following: pain, watering, redness. Causes skin irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	No information available
Protective equipment and precautions for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Specific hazards	No specific fire or explosion hazard.
Hazardous combustion products	Decomposition products may include the following materials: Carbon dioxide. carbon monoxide

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Methods and materials for containment and cleaning up

This product is miscible in water.

Large Spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small Spills: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

7. HANDLING AND STORAGE

Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Suitable materials of construction No information available

Unsuitable materials of construction No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sodium hydroxide (CAS1310-73-2)	Ceiling	2 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards Components

Type	Value		
Sodium hydroxide (CAS1310-73-2)		Ceiling	2 mg/m3

Appropriate engineering controls If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Eye/face protection Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General hygiene considerations

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES
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pH	12.1
Appearance	Brown liquid
Odor	Characteristic
Odor Threshold	No information available
Melting/freezing point	No information available
Initial boiling point/boiling range	No information available
Flash point	Not applicable
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Percent volatile	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	1.17
Solubility	No information available
Partition coefficient	No information available

n-octanol/water	
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available

10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	Stable under normal conditions of storage and handling.
Hazardous polymerization	Polymerization will not occur.
Conditions to avoid	No specific data.
Incompatibilities	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

<u>Acutotoxicity</u>				
Product/ingredient name	Result	Species	Dose	Exposure
KR-59CTL	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	>100 mg/L >2000 mg/kg >4000 mg/kg	4 hours - -

<u>Irritation/Corrosion</u>				
Product/ingredient name	Result	Species	Score	Exposure
Tetrasodium EDTA	Eyes – Moderate irritant	Rabbit	-	24 hours 100 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams

Information on likely routes of exposure

Inhalation	No known significant effects or critical hazards
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	No known significant effects or critical hazards
Skin contact	Adverse symptoms may include the following: Irritation, redness
Eye contact	Adverse symptoms may include the following: pain or irritation, watering, redness
Ingestion	No known significant effects or critical hazards.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	There is no data available.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity There is no data available

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

Reproductive toxicity. There is no data available.

Specific target organ toxicity - single exposure There is no data available.

Specific target organ toxicity – repeated exposure There is no data available.

Aspiration hazard There is no data available.

Chronic effects No known significant effects or critical hazards

12. ECOLOGICAL INFORMATION

Toxicity	Result	Species	Exposure
Product/ingredient	Acute LC50 520 mg/L	Ceriodaphnia dubia	48 hours
KR-59CTL	Acute LC50 1030000 µg/L Fresh water	Fish - Lepomis macrochirus	96 hours

Ecotoxicity

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION**US Department of Transportation (DOT) – Not Regulated**

UN number
UN proper shipping name
Class
Transport hazard class(es)
Subsidiary risk
Label(s)
Packing group
Special precautions for user
Special provisions
Packaging exceptions
Packaging non bulk
Packaging bulk

15. REGULATORY INFORMATION

U.S. REGULATIONS United States inventory (TSCA 8b): All components are listed or exempted.
CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2) Listed.

SARA 304 Emergency release notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 311/312 Hazard Categories

Immediate: Yes

Delayed: Yes

Fire: -

Reactivity: Yes

Sudden Release of Pressure: -

SARA 302 Extremely hazardous substance

Not listed.

SARA 313:

Chemical name	CAS number	% by wt.
None		

None

Clean Air Act:

This material does not contain any hazardous air pollutants.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.

(a)

Sodium hydroxide (CAS 1310-73-2)

US. Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2)

US. New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium hydroxide (CAS 1310-73-2)

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region (yes/no)*	Inventory name	On inventory
Australia	Australian Inventory of Chemical Substances (AICS)	Not determined
Canada	Domestic Substances List (DSL)	Not determined
Canada	Non-Domestic Substances List (NDSL)	Not determined

China	Inventory of Existing Chemical Substances in China (IECSC)	Not determined
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Not determined
Europe	European List of Notified Chemical Substances (ELINCS)	Not determined
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Not determined
Korea	Existing Chemicals List (ECL)	Not determined
New Zealand	New Zealand Inventory	Not determined
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Not determined

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing

COUNTRY(S).16. OTHER INFORMATION

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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.