



## Safety Data Sheet

# CLR-376

### 1. IDENTIFICATION

<b>Product name</b>	CLR-376
<b>Description</b>	Proprietary aqueous solution
<b>Product class</b>	Cooling Water
<b>Supplier address</b>	1301 Ashwood Drive Canonsburg, PA 15317
<b>Telephone numbers</b>	
<u>Company Phone Number</u>	(412)-217-4032
<u>Emergency Telephone</u>	INFOTRAC 800-535-5053

### 2. HAZARDS IDENTIFICATION

<b>Hazard classification</b>	Skin Corrosion, Category 1 Serious Eye Damage, Category 1
<b>Signal word</b>	Danger
<b>Hazard statements</b>	Causes severe skin burns and eye damage. Causes serious eye damage.

**Pictograms of related hazards**



**Precautionary statements**

Prevention

Wash skin thoroughly after handling.  
Wear protective gloves, protective clothing, eye protection, and face protection.

Response

Wash contaminated clothing before reuse.  
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately contact a POISON CENTER or health care provider.  
IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or emergency shower.  
IF INHALED: Remove victim to fresh air and keep at rest in a position 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 contact a POISON CENTER or health care provider.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with local, state, and federal regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	2809-21-4	1-10
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	1-10
Non-hazardous substances	Proprietary	>80

### 4. FIRST-AID MEASURES

<b>Eye contact</b>	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.
<b>Skin contact</b>	Immediately remove all contaminated clothing. Rinse with copious amounts of water; use an emergency shower if available. Wash contaminated clothing before reuse.
<b>Ingestion</b>	If swallowed, DO NOT induce vomiting. Rinse mouth and get emergency medical attention. Do not give anything by mouth unless instructed to do so by a poison center or health care provider.
<b>Inhalation</b>	If inhaled, move victim to fresh air. Seek emergency medical attention if breathing is difficult; perform artificial respiration if breathing stops.
<b>Note to health care provider</b>	Esophageal corrosion may contraindicate the use of gastric lavage and/or activated charcoal.

### 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Use extinguishing media appropriate for the surrounding fire.
<b>Unsuitable extinguishing media</b>	No information available
<b>Protective equipment and precautions for firefighters</b>	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.
<b>Specific hazards</b>	Reaction with metals may evolve highly flammable hydrogen gas. Combustion may produce toxic gases.
<b>Hazardous combustion products</b>	Carbon oxides, nitrogen oxides, sulfur 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**

Small spills 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.

Large spills 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** Corrosion-resistant container; original container only is recommended.

**Unsuitable materials of construction** Metals

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Eye/face protection** Chemical splash goggles, face shield

**Skin protection** Chemical-resistant gloves and body-covering clothing

**Respiratory protection** Observe published airborne exposure limits. NIOSH approved respirator should be used in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

**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
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	None established	None established
2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	None established	None established
Non-hazardous substances	None established	None established

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>pH</b>	1.0-2.0
<b>Appearance</b>	Clear colorless liquid
<b>Odor</b>	Mild to no odor
<b>Odor Threshold</b>	No information available
<b>Melting/freezing point</b>	No information available
<b>Initial boiling point/boiling range</b>	No information available
<b>Flash point</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Upper/lower flammability or explosive limits</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>VOC content</b>	No information available
<b>Specific gravity</b>	1.050-1.150
<b>Solubility</b>	Complete
<b>Partition coefficient n-octanol/water</b>	No information available
<b>Auto-ignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity</b>	No information available

### 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Stable under normal conditions of storage and handling.
<b>Hazardous polymerization</b>	Polymerization will not occur.
<b>Conditions to avoid</b>	Extreme temperatures, incompatibilities
<b>Incompatibilities</b>	Strong bases, oxidizers
<b>Hazardous decomposition products</b>	No known non-thermal decomposition hazards.

<b>11. TOXICOLOGICAL INFORMATION</b>
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Likely routes of exposure      Skin, eyes, ingestion

**Acute toxicity*****1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)***

Parameter	Result
LD <sub>50</sub> , Oral (rat)	1,536-2,003 mg/kg
LD <sub>50</sub> , Oral (mouse)	1,100 mg/kg
LD <sub>50</sub> , Dermal (rabbit)	>6,000 mg/kg
Draize, Eye (rabbit)	Severe corrosion

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

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

**Acute symptoms and effects**

<b>Eye</b>	Severe eye irritation with serious damage including, but not limited to, tissue destruction, corneal opacification, and temporary or permanent blindness.
<b>Skin</b>	Skin irritation with or without pain, burning, itching, redness, and swelling. Symptoms may be exacerbated by open wounds, excoriations, rashes, or other skin breaches.
<b>Ingestion</b>	Gastrointestinal distress with or without nausea, vomiting, and diarrhea. May cause irritation or corrosion of the oral and esophageal mucosa.
<b>Inhalation</b>	Upper respiratory irritation with or without cough, watering of the eyes, and postnasal drip. Aspiration of liquid or vomit may cause severe respiratory distress, airway corrosion, and acute lung damage.
<b>Reproductive effects</b>	No information available
<b>Teratogenicity</b>	No information available
<b>Mutagenicity</b>	No information available
<b>Embryotoxicity</b>	No information available
<b>Sensitization to product</b>	No information available
<b>Synergistic products</b>	No information available
<b>Carcinogenicity</b>	No components have been identified as carcinogenic by OSHA, NTP, or IARC.
<b>Chronic</b>	Repeat, long-term, or high-dose exposure to HEDP has been implicated in dysregulation of blood calcium levels and shown adverse effects on bone mineralization.

**12. ECOLOGICAL INFORMATION****Aquatic toxicity****1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)**

Parameter	Result
96 hr LC <sub>50</sub> , Bluegill sunfish	>10,000 mg/L
96 hr LC <sub>50</sub> , Rainbow trout	4,900 mg/L
48 hr EC <sub>50</sub> , Daphnia magna	2,800 mg/L

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

Parameter	Result
48 hr LC <sub>50</sub> , Leuciscus idis	>500 mg/L
24 hr EC <sub>50</sub> , Daphnia magna	747 mg/L
48 hr LC0, Rainbow trout	3,440 mg/L
72 hr LC0, Leuciscus idus	>2,000 mg/L
14 day NOEC, Zebra fish	>1,042 mg/L
21 day LC <sub>50</sub> , 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** As sold, discarded product would be considered a RCRA hazardous waste based on the corrosive characteristics. The EPA hazardous waste number is D002.

**14. TRANSPORT INFORMATION****US Department of Transportation (DOT)**

<b>UN Number</b>	UN3265
<b>Proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s. (contains 1-Hydroxyethylidene-1,1-diphosphonic acid, 2-Phosphono-1,2,4-butanetricarboxylic acid)
<b>Primary hazard class/division</b>	8
<b>Secondary hazard</b>	None
<b>Packing group</b>	III
<b>Label</b>	Corrosive

### 15. REGULATORY INFORMATION

**OSHA Hazard Communication Status** Skin Corrosion, Category 1  
Serious Eye Damage, Category 1

**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)
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	None
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;  
Special Hazard—None

**HMIS and NFPA Rating Scale** Minimal—0; Slight—1; Moderate—2; Serious—3;  
Severe—4

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**Version** 1

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