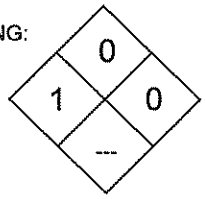
NFPA RATING:
4=Severe
3=Serious
2=Moderate
1=Slight
0=Minimal



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **7913**
PRODUCT DESCRIPTION: *Cooling Water Treatment*

Revised: October 12, 2006

24-HOUR EMERGENCY TELEPHONE:
CHEMTREC 800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS #	HAZARD	WT %	ACGIH TLV(TWA)	ACGIH STEL	OSHA PEL(TWA)	OSHA STEL
Hydroxyethylidene diphosphonic acid (HEDP)	2809-21-4	Irritant	1 – 5	NE	NE	NE	NE
Phosphonobutane tricarboxylic acid (PBTC)	37971-36-1	Irritant	1 – 5	NE	NE	NE	NE
Polymaleic acid	26099-09-2	Irritant	1 – 5	NE	NE	NE	NE

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous and/or present at amounts below reportable limits.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
Clear, pale yellow liquid
Bland odor
WARNING: May cause moderate to severe irritation to eyes. May cause some irritation to skin. Wear safety glasses and gloves when handling. Wash thoroughly after handling.

POTENTIAL HEALTH EFFECTS ☒ Eye contact ☒ Skin contact ☒ Ingestion ☐ Inhalation

EYE CONTACT: Exposure to liquid product may cause moderate irritation to eyes. Symptoms of exposure may include redness, swelling, tearing or pain.

SKIN CONTACT: Exposure to liquid product may be slightly irritating to skin. Symptoms of exposure may include redness, swelling or pain.

INGESTION: Exposure to liquid product is not expected to result in significant adverse effects.

INHALATION: No information is available. Inhalation is not believed to be a likely route of exposure.

CHRONIC: Effects of chronic exposure are not expected to differ from the above-mentioned contact.

CARCINOGENS: This product and its components are not listed on IARC, OSHA or ACGIH lists as cancer-causing agents. This product contains a chemical that is classified as a suspected carcinogen on

the NTP Report (benzotriazole). NCI bioassay for benzotriazole showed no convincing evidence of carcinogenicity.

AGGRAVATION OF PRE-EXISTING CONDITIONS: There are no known medical conditions that would be possibly aggravated by exposure to this product.

4. FIRST AID MEASURES

EYE CONTACT: If this product contacts the eyes, immediately flush eyes with plenty of clean running water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if worn. Seek medical attention if irritation persists.

SKIN CONTACT: If this product contacts the skin, immediately flush the affected area with soap and water for at least fifteen (15) minutes. If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. Seek medical attention if irritation persists.

INGESTION: If this product is ingested, drink small amounts of water and seek medical attention promptly. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. Seek medical attention if symptoms persist.

NOTES TO PHYSICIAN: This product is irritating to eyes, skin and mucous membranes. This product has low oral toxicity. Treat exposure symptomatically.

5. FIRE FIGHTING MEAURES

FLASH POINT:	None – aqueous solution.
FLAMMABLE LIMITS:	NA
AUTOIGNITION TEMPERATURE:	NA

EXTINGUISHING MEDIA: Use water, foam, dry chemical or carbon dioxide to extinguish fire.

FIRE/EXPLOSION HAZARD: Dried residue can thermally decompose, giving off irritating and possibly toxic fumes.

FIRE FIGHTING EQUIPMENT: Fire fighters should wear full protective equipment, and have self-contained breathing apparatus available.

SPECIAL PROCEDURES: Use water to cool containers exposed to a fire.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, possibly toxic phosphines.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use proper personal protection (refer to Section 8).

ENVIRONMENTAL PRECAUTIONS: Run off from fire control or dilution water may cause pollution. Keep out of drains, municipal sewers, open bodies of water and water course.

CLEAN-UP METHODS: Safely stop source of spill. Clean up spills immediately. Restrict non-essential personnel from the area. Wear protective clothing, goggles and respirator if ventilation is not adequate. For small spills, neutralize with baking soda and flush to sewer. For large spills, dike spill area and soak

up material with sand or other absorbent. Place into chemical waste container for disposal according to local, state or federal regulations. Neutralize residue with lime or soda ash and flush spill area.

7. HANDLING AND STORAGE

HANDLING: Use proper personal protection when handling (refer to Section 8). Use under well-ventilated conditions. Avoid contact with eyes, skin and clothing. Avoid breathing vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal.

SHELF LIFE: The recommended shelf life is two (2) years. It is recommended that products be retested if stored for more than two (2) years. Under ideal storage conditions, the shelf life is almost indefinite.

STORAGE TEMPERATURE: The recommended storage temperature is above 32°F, preferably at room temperature (70°F).

GENERAL: Store closed containers in a cool, dry, well-ventilated area away from incompatible materials. This product is stable under normal conditions of handling and storage. Avoid cold temperatures.

8. EXPOSURE CONTROLS / PERSONAL PROTECTIVE EQUIPMENT

Please refer to Section 2 for applicable exposure limits.

EYE PROTECTION: To avoid contact with eyes, use safety glasses or chemical splash goggles. Face shield is recommended. Eye wash station should be available in the work area.

HAND PROTECTION: Use rubber or plastic gloves to minimize skin contact.

BODY PROTECTION: A rubber apron and boots are recommended to minimize contact. Full drench shower should be available in the work area.

RESPIRATOR: Use of respirator protection is not generally required. However, if exposure is above the stated limits or ventilation is inadequate, use a NIOSH approved acid gas/organic vapor respirator to reduce potential for inhalation exposure. When using respirator cartridges, they must be changed frequently to assure breakthrough exposure does not occur.

VENTILATION: General mechanical ventilation is recommended for enclosed areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, pale yellow liquid	**Boiling Point:**	100°C / 212°F
Odor:	Bland	**Freezing Point:**	0°C / 32°F
Specific Gravity @ 68°F:	~ 1.07	**Vapor Pressure:**	23.75 mmHg
pH:	~ 2.3	**Vapor Density (air = 1):**	ND
Water Solubility:	Complete	**VOC Content:**	< 2%

10. STABILITY AND REACTIVITY

GENERAL STABILITY: This product is stable at ambient temperatures and atmospheric pressures.

INCOMPATIBLE MATERIALS: Strong alkali and oxidizing materials.

HAZARDOUS POLYMERIZATION: Hazardous polymerization is not expected to occur under normal temperatures and pressures.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, possibly toxic phosphines.

11. TOXICOLOGICAL INFORMATION

	Product 7913	HEDP	PBTC	Polymaleic acid
Eye irritation:	Moderate to severe	Corrosive	Slight to moderate	Corrosive
Skin irritation:	Slight to moderate	None to slight	None to slight	Moderate
Inhalation irritation:	None to slight	Moderate to severe	None to slight	Slight to moderate
Oral LD_{50}, Rat:	> 5012 mg/kg	2400 mg/kg	5000 mg/kg	15000 mg/kg
Dermal LD_{50}, Rabbit:	> 1426 mg/kg	7940 mg/kg	NDA	NDA
Inhalation LC_{50}, Rabbit:	NDA	NDA	NDA	NDA
Other toxicological data:	NA	See below	See below	See below

HEDP: [Chronic Toxicity] Dogs orally dosed develop severe effects on the bone, with rib and pelvic fractures reported in many of the animals. No birth defects were noted in rats or rabbits given the product orally during pregnancy. No effects were seen on the ability of female and male rats to reproduce when given the product in their diet for two successive generations. The product produced no genetic changes in standard in vitro assays using bacterial and mammalian cells.

PBTC: [Chronic Toxicity] 2-phosphono-butane-tricarboxylic acid was not mutagenic in the Ames Assay. No significant health effects expected. [Acute effects from overexposure] This product has low oral toxicity. It is irritation to the eyes and non-irritating to the skin. 2-phosphono-butane-tricarboxylic acid is moderately irritating to the mucous membranes.

Polymaleic Acid: [Chronic Toxicity] Results from subchronic studies in laboratory animals did not produce any adverse effects. Product was not mutagenic in the Ames Assay. [Acute Effects From Overexposure] Product will cause severe irritation of the mucous membranes and skin. Eye damage may include conjunctivitis, swelling and fluid discharge, permanent corneal damage and blindness. Skin and mucous membrane irritation may include severe swelling, redness and scar formation. Overexposure to mists or vapors will cause difficulty in breathing due to irritation and fluid in the lungs, which can result in severe tissue damage or even death.

12. ECOLOGICAL INFORMATION

	Product 7913	HEDP	PBTC	Polymaleic acid
96 hr LC_{50}, Rainbow trout:	> 4200 mg/l	NDA	1000 mg/l	100 mg/l
48 hr LC_{50}, Daphnia magna:	> 4500 mg/l	NDA	300 mg/l	580 mg/l
72 hr EC_{50}, Algae:	> 1900 mg/l	NDA	1000 mg/l	NDA

13. DISPOSAL CONSIDERATIONS

US EPA RCRA Status: This product is not considered to be a hazardous waste.
US EPA RCRA Hazardous waste code: NA

Do NOT dump into any sewers, on the ground or into any body of water. Rinse containers before disposal. Since emptied containers contain product residue, follow label warnings even after container is emptied. Dispose in accordance with all applicable federal, state and local laws and regulations.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

US DOT
Proper Shipping Name: Not DOT regulated
Hazard Class: NA
Hazard Identification Number: NA
Packing Group: NA
Transport Label: Scale Preventing/Scale Removing Liquid or Paste

15. REGULATORY INFORMATION

Components:	HEDP	PBTC	Polymaleic acid
Carcinogenic Potential			
Regulated by OSHA:	No	No	No
Listed on NTP Report:	No	No	No

Listed by IARC / Group:	No	No	No
ACGIH Appendix A / Group:	Not listed	Not listed	Not listed
US EPA Release Reporting			
CERCLA (40 CFR 302):			
Listed substance:	Not listed	Not listed	Maleic acid (< 0.5% in product)
Reportable quantity:	NA	NA	5000 lbs.
Category:	NA	NA	D
RCRA waste number:	NA	NA	NDA
Unlisted substance:	NA	NA	NA
Reportable quantity:	NA	NA	NA
Characteristic:	NA	NA	NA
RCRA waste number:	NA	NA	NA
SARA TITLE III			
Section 302 & 303 (40 CFR 355):			
Listed substance:	Not listed	Not listed	Not listed
Reportable quantity:	NA	NA	NA
Planning threshold:	NA	NA	NA
Section 311 & 312 (40 CFR 370):			
Hazard categories:	Acute	Acute	Acute, chronic
Planning threshold:	10000 lbs.	10000 lbs.	10000 lbs.
Section 313 (40 CFR 372):			
Listed toxic chemical:	Not listed	Not listed	Not listed
Reporting threshold:	NA	NA	NA
US TSCA			
Listed/Exempt (40 CFR 710):	Yes	Yes	Yes
CA PROP 65			
Carcinogen:	No	No	No
Reproductive toxin:	No	No	No

16. OTHER INFORMATION

HMIS Rating

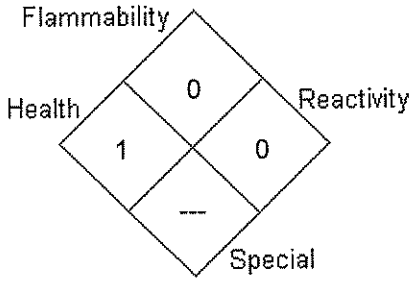
HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PROTECTION	B

B = Safety glasses, gloves

KEY

4 = Severe	ACID = Acid
3 = Serious	ALK = Alkali
2 = Moderate	COR = Corrosive
1 = Slight	OX = Oxidizer
0 = Minimal	W = Use NO WATER

NFPA Rating



Legend:

ACGIH:	American Conference of Governmental Industrial Hygiene
A1:	Confirmed human carcinogen
A2:	Suspected human carcinogen
A3:	Confirmed animal carcinogen
CAS #:	Chemical Abstract Service Registry number
CERCLA:	Comprehensive Environmental Response Compensation and Liability Act
DOT:	Department of Transportation
EPA:	Environmental Protection Agency
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
Group 1:	Carcinogenic to humans
Group 2A:	Probably carcinogenic to humans
Group 2B:	Possibly carcinogenic to humans
Group 3:	Unclassified as carcinogenic to humans
NA or N/A:	Not applicable
ND:	Not determined
NDA:	No data available
NE:	Not established
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
RCRA:	Resource Conservation and Recovery Act
REL:	Recommended Exposure Limit
SARA TITLE III:	Superfund Amendments and Reauthorization Act
STEL:	Short Term Exposure Limit (15 minute Time Weighted Average)
TLV:	Threshold Limit Value
CEIL (C):	Ceiling Exposure Limit
TSCA:	Toxic Substance Control Act
TWA:	Time Weighted Average
VOC:	Volatile Organic Compound
> / <:	Greater than / Less than
~:	Approximately

COOLING WATER TREATMENT

7913

DESCRIPTION

7913 Cooling Water Treatment is a unique blend of organic scale and corrosion inhibitors and polymeric dispersants. It is designed to provide excellent scale control under extreme conditions as well as corrosion protection. 7913 contains an organic sequestrant, which will prevent the formation of scale on heat transfer surfaces. It also contains a polymeric dispersant for the prevention of fouling and the dispersion of suspended solids. Corrosion of both ferrous and copper alloys is controlled by a combination of organic corrosion inhibitors.

APPLICATION

7913 is intended for use in industrial open cooling water systems. It can be used in an alkaline treatment program or in conjunction with acid for pH control. This product is particularly recommended for use in systems having very high heat transfer rates and high operating temperatures.

PHYSICAL PROPERTIES

Color & Form	Pale yellow liquid
Specific Gravity	1.063
Product pH	2.3
Density	8.86 lbs./gal.
Odor	Slightly aromatic

DOSAGE & FEEDING

7913 is best fed by a makeup meter impulsed chemical feed system designed to feed the treatment in proportion to makeup flow.

7913 should be maintained at the recommended treatment level at all times to insure continuous protection.

For best results, feed 7913 directly from the shipping container. If necessary, it can be diluted in a chemical feed tank using low hardness water.

Your technical representative will recommend the proper feed rate and treatment dosage based on system operating parameters.

HANDLING & PRECAUTIONS

This product is irritating to eyes and skin. Do not get in eyes, on skin, or clothing. As with all chemicals, this product should be handled with care.

PACKAGING

7913 liquid is available in:

5-gallon pails	net wt. 40 lbs.
30-gallon drums	net wt. 260 lbs.
55-gallon drums	net wt. 500 lbs.