Walter Louis
FLUID TECHNOLOGIES
530 South Fifth Street, Quincy, IL 62301-4896
V: 217-223-2017 F: 217-223-7734 8am-5pm US CST
After Hours: CHEMTREC 1-800-424-9300

SAFETY DATA SHEET (GHS Format)
Also available for download at:
http://www.WalterLouis.com/MSDS/

1. IDENTIFICATION

Trade Name: 5230 Anti-Foulant
Chemical Name & Synonyms: Proprietary Water Treatment Blend
Product Application: Fouling/scaling prevention in R.O. Pretreatment Systems
Emergency telephone number: CHEMTREC: 800-424-9300 Poison Control: 800-222-1222
UN/ID No: 3265

2. Hazards Identification

Classification: Corrosive
Signal Word: DANGER
Pictograms:

Physical Hazards:
H290 May be corrosive to metals.
Health Hazards:

Acute toxicity - Oral	Category 1
Skin corrosion/irritation	Category 1A-1C
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (one exposure)	Category 2

Environmental Hazards: None known
Hazard Statements:
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H371 - May cause damage to organs (kidney, liver,spleen).
Precautionary Statements:
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases:
P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+311 - If exposed of concerned: Call a POISON CENTER/Doctor
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment see Response/First aid section on this label.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.

3. Composition / Information on Ingredients

Chemical Name	CAS No	Weight-%	EC No

1-Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	1-4%	SZ8562100
Phosphorous acid, Ortho	13598-36-2	<0.5%	SZ6400000
Phosphonic acid, reaction products with maleic anhydride, sodium salts	180513-31-9	8-15%	
2-Butenedioic acid (2Z)-, sodium salt (1:2)	371-47-1	<1%	
Phosphoric acid, sodium salt (1:3)	7601-54-9	<1%	

4. First Aid Measures

General Advice:

P101: If medical advice/attention is needed; have product container/ label/SDS at hand

Eye Contact:

P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Skin Contact:

P303/P361/P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Inhalation:

P304/ P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Ingestion:

P301/P330/P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Give water or milk if available. Never give anything by mouth to an unconscious person.

P311 Call a POISON CENTER/ doctor.

Note to Physicians: Treat symptomatically.

Self-protection of the First Aider: None specific. General healthcare PPE is appropriate

5. Fire-fighting Measures

Flammable Properties: Non-flammable

Explosive Properties: N/A

Suitable Extinguishing Media: N/A

Unsuitable Extinguishing Media: N/A

Specific Hazards Arising from the Chemical: None known

Protective Equipment and Precautions for Firefighters:

In the event of a fire, wear full protective clothing and MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus with full facepiece operated in the pressure-demand or other positive pressure mode

6. Accidental Release Measures

Personal Precautions: Routine PPE for any spill, no unique requirement.

Environmental Precautions: If not diluted, this product may become a hazardous waste as designated by the EPA under authority of the Resource Conservation and Recovery Act (RCRA)

Methods for Cleaning Up: Product is water soluble and may be diluted and flushed as below described.

Other Information: This product is intended to be used in pretreatment of water entering ultrafiltration equipment, and discharged to sanitary sewer in the subsequent waste stream. Concentrated product may be diluted to a similar working concentration and flushed to sewer or concentrated product soaked up with absorbent material and landfilled in accordance with local, state, and federal regulations.

7. Handling and Storage

Advice on Safe Handling: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible Materials: None known

8. Exposure Controls / Personal Protection

Chemical Name	**ACGIH TLV**	**OSHA PEL**
N/A	N/A	N/A

Exposure Guidelines N/A

Engineering Controls: Ensure adequate ventilation, especially in confined areas

Personal protective equipment (PPE) Wear suitable industrial protective clothing

Eye/Face Protection: Industrial Safety Glasses, chemical splash-resistant goggles as needed.

Body Protection: Industrial protective clothing, rubber gloves when appropriate

General Hygiene Considerations: Do not eat, drink, or smoke while handling this product.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance: Clear light yellow liquid with slight organic odor

pH: 1.54

Specific Gravity: 1.066

Molecular Weight: Mixture

Water Solubility: Completely soluble

Melt/FreezePoint: 0°C / 32 °F

Boiling Point: 100 °C / 212 °F

Flammability N/A

Flash Point: N/A

Vapor density: N/A

10. Stability and Reactivity

Stability: Stable under normal conditions of use and storage

Conditions to Avoid: None known

Incompatible Materials: Strong acids without dilution or agitation, metal alloys, chlorinated hydrocarbons, niter paraffins.

Hazardous Decomposition Products: None known

Possibility of Hazardous Reactions: None known

11. Toxicological Information

Chemical

1-Hydroxyethylidene-1,1-diphosphonic acid

Toxicological Information:

Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: Mutagenicity: Neurotoxicity: Other Studies:
CAS# 2809-21-4:
Reproductive Effects:, TDLo, Intraperitoneal, Mouse, 40.00 MG/KG, female 7 day(s) after conception.
Result:
Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
- Shika Igaku. Odontology., Vol/p/yr: 50,879, 1987
Reproductive Effects:, TDLo, Intraperitoneal, Mouse, 200.0 MG/KG, female 7 day(s) after conception.
Result:
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow).
- Journal of Osaka Dental University., Vol/p/yr: 20,91, 1986
Reproductive Effects:, TDLo, Subcutaneous, Mouse, 200.0 MG/KG, female 13 day(s) after conception.
Result:
Specific Developmental Abnormalities: Musculoskeletal system.
- Teratology, The International Journal of Abnormal Development, Alan R. Liss, Inc., 41 E. 11th St., New York, NY 10003, Vol/p/yr: 26(1),16A, 1982
Reproductive Effects:, TDLo, Subcutaneous, Mouse, 1400. MG/KG, female 11-17 day(s) after conception.
Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Specific Developmental Abnormalities: Musculoskeletal system.
- Senten Ijo. Congenital Anomalies., For publisher information, see CGANE7, Osaka Japan, Vol/p/yr: 22,47, 1982
Acute toxicity, LD50, Oral, Mouse, 1800. MG/KG.
Result:
Behavioral: Convulsions or effect on seizure threshold.
Gastrointestinal:Hypermotility, diarrhea.
Nutritional and Gross Metabolic:Changes in:Body temperature increase.
- Angewandte Chemie, International Edition in English., VCH Pub., Inc., 303 NW 12th Ave., Deerfield Beach, FL 33441, Vol/p/yr: 14,94, 1975
CAS# 13598-36-2:
Acute toxicity, LD50, Oral, Rat, 1895. MG/KG.
Result:
Behavioral: Convulsions or effect on seizure threshold.
Gastrointestinal:Hypermotility, diarrhea.
Nutritional and Gross Metabolic:Changes in:Body temperature increase.
- Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 56(4),24, 1991

12. Ecological Information

Ecotoxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
1-Hydroxyethylidene-1,1-diphosphonic acid	N/A	368 mg/L	528 mg/L

Persistence/Degradability: Degrades after acclimatization.

Bioaccumulation: This material is not expected to bio-accumulate.

Mobility: Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

13. Disposal Considerations

Waste from Residues/Unused Products:

P501 Dispose of contents/container in accordance with local/state/federal regulations
Dilute with large amounts of water, neutralize with calcium carbonate or sodium carbonate (soda ash) before disposal.

Contaminated Packaging: Do not reuse container for potable / food contact. Wash and rinse thoroughly before reuse / recycling

14. Transport information (USDOT):

Proper shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Maleic Acid)
Hazard Class: 8
UN/ID No UN 3265
Packing Group I
Reportable Quantity (RQ) None
Description: N/A

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS # Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
2809-21-4 1-Hydroxyethylidene-1,1-diphosphonic acid	No	No	No
13598-36-2 Phosphorous acid, Ortho	No	No	No

[X] Yes [ ] No Acute (immediate) Health Hazard
[X] Yes [ ] No Chronic (delayed) Health Hazard
[ ] Yes [X] No Fire Hazard
[ ] Yes [X] No Sudden Release of Pressure Hazard
[ ] Yes [X] No Reactive Hazard

This material meets the EPA
'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
13598-36-2	Phosphorous acid, Ortho	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; China IECSC: Yes; Japan ENCS: Yes - (2)-2936; Korea ECL: Yes - KE-20516; Philippines ICCS: Yes; Taiwan TCSCA: Yes; REACH: Yes - (R), (P)
13598-36-2	Phosphorous acid, Ortho	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; China IECSC: Yes; Japan ENCS: Yes - (1)-421; Korea ECL: Yes - KE-28491; Philippines ICCS: Yes; Taiwan TCSCA: Yes; REACH: Yes - (R), (P)

Regulatory information provided in this SDS was prepared for this product and is to be used only for the product in its present form, If this material is used as a component in another material or altered in any way, the information in this SDS may no longer be applicable. This document was generated for the purpose of distributing health, safety and environmental data.

National Fire Protection Association (NFPA) Ratings:

NSF Certification: N/A

16. Other Information

This Safety Data Sheet compiled from information provided by the raw chemical product manufacturers.

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