

Technical Data Sheet

1-Hydroxyethane 1,1-Diphosphonic Acid

HEDP (CAS NO.:2809-21-4)



Product Description

- HEDP is an organic phosphoric acid corrosion inhibitor. It can chelate with Fe, Cu, and Zn ions to form stable chelating compounds. It can dissolve the oxidized materials on these metals' surfaces.
- HEDP shows excellent scale and corrosion inhibition effects under temperature 250°C.
- HEDP has good chemical stability under high pH value, hard to be hydrolyzed, and hard to be decomposed under ordinary light and heat conditions. Its acid/alkali and chlorine oxidation tolerance are better than that of other organic phosphoric acids (salt).
- HEDP can react with metal ions in water system to form hexa-element chelating complex, with calcium ion in particular.
- HEDP has good antiscaling and visible threshold effects. When built together with other water treatment chemicals, it shows good synergistic effects.
- The solid state of HEDP is crystal powder, suitable for usage in winter and freezing districts. Because of its high purity, it can be used as cleaning agent in electronic fields and as additives in daily chemicals.



Specification

Items	Index	
Appearance	Colorless or light yellow transparent liquid	White crystalline powder
Active content %	58-62	90
Phosphorous acid %	2.0 max	0.8 max
Phosphoric acid %	0.8 max	0.5 max
PH(1% water solution)	2.0 max	2.0 max
Iron(as Fe+3) PPM	10 max	5.0 max
Chlorides (as CL-) %	1.0 max	0.1 max

Usage

- HEDP is used as scale and corrosion inhibition in circulating cool water system, oil field and low-pressure boilers in fields such as electric power, chemical industry, metallurgy, fertilizer, etc.
- In light woven industry, HEDP is used as detergent for metal and nonmetal.
- In dyeing industry, HEDP is used as peroxide stabilizer and dye-fixing agent;
- In non-cyanide electroplating, HEDP is used as chelating agent.
- The dosage of 1-10mg/L is preferred as scale inhibitor, 10-50mg/L as corrosion inhibitor, and 1000-2000mg/L as detergent. Usually, HEDP is used together with polycarboxylic acid.

Packing and Storage

Item	Packing	Quantity/FCL	N.W./FCL	G.W./FCL
90%	25Kgs/Bag	480Bags	12.00MT	12.24MT
60%	250Kgs/Plastic Drum	80Drums	20.00MT	20.80MT

- Store above 0°C/32°F. Do not use steel containers. Suitable containers include polyethylene, polypropylene, fibreglass,glass-lined steel and polyvinyl chloride. Do not use copper or brass plumbing or valves. Ensure that containers, whether empty or full, or part full, are tightly sealed unless in use.
- Avoid creating or breathing product mist. Use with adequate exhaust ventilation if a mist is created.
- Never cut, drill, weld or grind on or near this container. Avoid all contact with skin and wash work clothes frequently.An eye bath and safety shower must be available near the workplace.

Transport Information

DOT Classification: Class 8: Corrosive material

Identification: : Corrosive Liquid, Acid, Organic, n.o.s. (1-hydroxyethanediphosphonic acid)

UNNA: 3265 PG: III

Special Provisions for Transport: Not available.

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