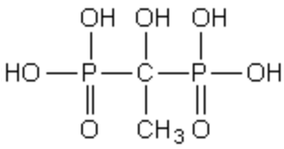
Molecular Formula: $C_2H_8O_7P_2$

Molecular weight: 206.02

Structural Formula:



Properties:

HEDP is an organophosphoric 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. HEDPshows excellent scale and corrosion inhibition effects under temperature 250℃. 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 organophosphoric acids (salt). HEDP can react with metal ions in water system to form hexa-element chelating complex, with calcium ion in particular. Therefore, HEDP has good antiscale 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	Clear, Colorless to pale yellow aqueous solution	White crystal powder
Active content (HEDP)%	60.0min	90.0min
Active content ($HEDP{\cdot}H_2O$)%	-	98.0min
Phosphorous acid (as PO_3^{3-})%	1.0max	0.8max
Phosphoric acid (as PO_4^{3-})%	0.6max	0.5max
Chloride (as Cl^-) ppm	100.0max	100.0max
PH (1% water solution)	2.0max	2.0max
Density (20℃) g/cm^3	1.43-1.47	-
Fe，mg/L	10.0max	5.0max
Colour APHA (Hazen)	30.0max	-
Ca sequestration (mg $CaCO_3$/g)	500.0min	

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