



# 1-HYDROXY ETHYLIDENE-1,1-DIPHOSPHONIC ACID (HEDP)

## **SYNONYMS:**

Hydroxyethylidenedi(phosphonic acid); Dequest 2010; Etidronic acid; HEDP

## **CAS No:**

2809-21-4

## **MOLECULAR FORMULA:**

C<sub>2</sub> H<sub>8</sub> O<sub>7</sub> P<sub>2</sub>

**OTHER TRADE NAME:** Belclene 660

## **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. HEDP shows excellent scale and corrosion inhibition effects under temperature 250 degree. 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 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.

## **SPECIFICATION:**

Appearance	Clear, water-white to pale yellow solution
Active content	58.0-62.0%
Specific gravity at(20° C)	1.42-1.47
PH(1% solution)	2.0 Max
Iron(Fe)	10ppm Max
Ca Sequestration (mg CaCO <sub>3</sub> /g)	450 Min
Phosphorous acid(as PO <sub>3</sub> <sup>3-</sup> )	2.0% Max
Phosphoric acid(as PO <sub>4</sub> <sup>3-</sup> )	0.8% 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, It is used as detergent for metal and nonmetal. In dyeing industry, HEDP is used a 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. Because of its high purity, it can be used as cleaning agent in electronic fields and as additives in daily chemicals.

**PACKING:**

200Kgs Net Drum.