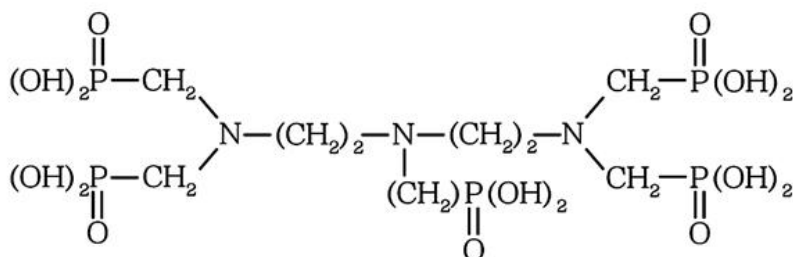


## Diethylene Triamine Penta (Methylene Phosphonic Acid) (DTPMPA)



<b>CAS No.</b>	15827-60-8	<b>EINECS No.</b>	239-931-4
<b>Molecular Formula</b>	C <sub>9</sub> H <sub>28</sub> O <sub>15</sub> N <sub>3</sub> P <sub>5</sub>	<b>Molecular Weight</b>	573.2

### Structural Formula



### Product Features

DTPMPA is innocuous, easy to be dissolved in acid solution. DTPMPA is an excellent inhibitor for mineral deposits (for example CaCO<sub>3</sub>, BaSO<sub>4</sub>, SrSO<sub>4</sub>) and a powerful complexing agent. DTPMPA inhibits scale formation at extremely low (ppm) dosage levels, sub-stoichiometric concentrations calculated on hardness of water. On situation of alkali environment and high temperature (above 210°C), wide range of PH Values, DTPMPA has better scale and corrosion inhibition effect than other organophosphines.

### Applications & Usage

DTPMPA can be used for scale and corrosion inhibitor in circulating cool water system, boiler water, especially in alkali circulating cool water system without additional pH regulation. DTPMPA can be used in oilfield refill water, cool water and boiler water with high concentration of barium carbonate. When used alone, little scale sediment is found even none of dispersant is used.

DTPMPA can be used for peroxide stabilizer, chelating agent in woven & dyeing industry, pigment dispersant, microelement' s carrying agent in fertilizer and concrete modifier.

DTPMPA is used in papermaking, electroplating, acid cleaning and cosmetics.


## Technical Specification

Parameter	Standard
Appearance	Brown transparent liquid
Active content, %	48.0-52.0
Chloride (as Cl <sup>-</sup> ), %	12-17
Density (20℃), g/cm <sup>3</sup>	1.35-1.45
pH (1% water solution)	2.0 max
Fe, mg/L	35 max



## Scale & Corrosion Inhibition Performance

CaCO <sub>3</sub> inhibition	CaSO <sub>4</sub> inhibition	CaF <sub>2</sub> inhibition	Iron control	Sequestration
Very Good	Excellent	Very Good	Very Good	Very Good
Calcium tolerance	Iron control	Sequestration	Iron control	
Good	Yes	Excellent	Very Good	

## Package & Storage

DTPMPA Liquid			
25L Drum	200L Drum	1000L IBC	ISO Tank
			
Storage for 10 months in shady room and dry place.			

## Hazard & Safety Precaution

Hazard Information	Safety Precaution
 Corrosive, Class 8, UN 3265	
Once contacted with eye and skin, flush with plenty of clean water.	

## Alternative Name / Synonyms

- DTPMP
- DETPMP
- DETPMPA
- Diethylene Triamine Penta (Methylene Phosphonic Acid)
- Diethylene Triamine Penta
- Diethylenetriaminepenta-Methylenephosphonic Acid