



>>Entry Name: Diethylenetriaminepentamethylenephosphonic acid

Synonym(s): [[[Phosphonomethyl)imino]bis[2,1-ethanediyl]nitrilobis(methylene)]]tetrakis[phosphonic acid], 9Cl. Dequest 2060. DTPMP

CAS Registry Number: 15827-60-8



Molecular Formula: $\text{C}_9\text{H}_{28}\text{N}_3\text{O}_{15}\text{P}_5$

Molecular Weight: 573.2

Accurate Mass: 573.020857

Percentage Composition: C 18.86%; H 4.92%; N 7.33%; O 41.87%; P 27.02%

Use/Importance: Sequestering agent; scale inhibitor in water treatment

Physical Description: Highly viscous liq. (as hexahydrate)

References:

U.S. Pat., 1976, 3 974 090; *CA*, **85**, 177612g, (*synth, use*)

Nancollas, G.H. *et al.*, *Corrosion (Houston)*, 1979, **35**, 304-308, (*props*)

Oakes, J. *et al.*, *J.C.S. Dalton*, 1984, 1133-1137, (*metal complexes, epr, uv, pmr*)

Rao, B. *et al.*, *Polyhedron*, 1989, **8**, 453-455, (*synth, metal complexes, epr, ir*)

Gillard, R.D *et al.*, *Polyhedron*, 1989, **8**, 2077-2086, (*pmr, P-31 nmr*)

Eur. Pat., 1990, 367 580; *CA*, **113**, 172347m, (*synth*)

Tang, K. *et al.*, *CA*, 1994, **121**, 83472w, (*synth*)

Tomson, M.B *et al.*, *Langmuir*, 1994, **10**, 1442, (*props, bibl*)