



Technical Data Sheet

VERSENE™ Tetraammonium EDTA Chelating Agent

Product Availability

- North America
- Europe
- Latin America
- Pacific
- India
- Middle East and Africa

Applications

- Metalworking
- Scale removal and prevention

Active Ingredient Name

Tetraammonium ethylenediaminetetraacetate

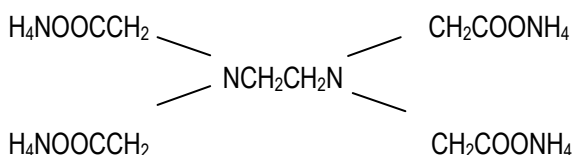
CAS Number

22473-78-5

Chemical Formula

$C_{10}H_{18}N_6O_8$ or
 $(NH_4OOCCH_2)NCH_2CH_2N(CH_2COONH_4)_2$

Chemical Structure



Molecular Weight

360.2

Other Names

$(NH_4)_4EDTA$

Description

VERSENE™ Tetraammonium EDTA Chelating Agent is an aqueous solution of the tetraammonium salt of ethylenediaminetetraacetic acid. When equipment uses water and evaporation or heat transfer occurs, salts often deposit to form scale. VERSENE™ Chelating Agents are used successfully to remove calcium and other types of scale from boilers, evaporators, heat exchangers, filter cloths and glass-lined kettles, and also to prevent scale formation.

Typical Properties†

Calcium Chelation Value	130 mg as CaCO ₃ per gram of VERSENE™ Tetraammonium EDTA	
Equivalent Chelation Capacity	One gram of VERSENE™ (NH ₄) ₄ EDTA has the equivalent chelation capacity of 1.3 mmoles of EDTA	
Metal Chelation Capacity	Parts chelant per part metal (w/w)	
Ca	19.2	
Mg	31.6	
Fe	13.8	
Cu	12.1	
Mn	14.0	
% Assay	47 wt% as NH ₄ EDTA 38 wt% as H ₄ EDTA	
Appearance	Light, straw colored liquid	
Specific Gravity at 25/25°C	1.17	
Bulk Density	1170 kg/m ³ or 9.8 lb/U.S. gal.	
pH	9.0-9.5 (1 wt% solution)	
Freezing Point	-21°C/-6°F	
Viscosity, Centistokes	Temperature	Viscosity, Centistokes
	0°C/32°F	15.6
	20°C/68°F	7.3
	40°C/104°F	4.1
Water Solubility	Completely miscible	

† The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications.

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