

Technical Data Sheet

Di Ethanol Amine (DEA)

Diethanolamine, often abbreviated as DEA or DEOA, is an organic compound with the formula $\text{HN}(\text{CH}_2\text{CH}_2\text{OH})_2$. Pure diethanolamine is a white solid at room temperature, but its tendency to absorb water and to supercool[2] mean it is often encountered as a colorless, viscous liquid. Diethanolamine is polyfunctional, being a secondary amine and a diol. Like other organic amines, diethanolamine acts as a weak base. Reflecting the hydrophilic character of the secondary amine and hydroxyl groups, DEA is soluble in water. Amides prepared from DEA are often also hydrophilic. Recently, the chemical has been classified by the International Agency for Research on Cancer as "possibly carcinogenic to humans (Group 2B)".

Application:

Diethanolamine is widely used in the preparation of diethanolamides and diethanolamine salts of long-chain fatty acids that are formulated into soaps and surfactants used in liquid laundry and dishwashing detergents, cosmetics, shampoos and hair conditioners. Diethanolamine is also used in the production of lubricants in the textile industry, in industrial gas purification to remove acid gases and as an emulsifier and dispersing agent in preparations of agricultural chemicals. Diethanolamine is used in metalworking fluids for cutting, stamping and die-casting operations as a corrosion inhibitor. In the production of detergents, cleaners, fabric solvents and metalworking fluids, diethanolamine is used for acid neutralization and soil deposition. Aqueous diethanolamine solutions are used as solvents for numerous drugs that are administered intravenously.

Properties	Value	Units	Test Method
Purity	98.5 min	wt%	MA- 503
Color	15 max	Pt-Co	ASTM D 1209
Water	0.15 max	wt%	ASTM D 1364
MEA	0.06max	wt%	MA-503
TEA	0.8 max	wt%	MA-503
SP.GR (20/20)°C	1.09 - 1094		ASTM D 891
Equivalent M.W	104 - 106	wt%	MA-238