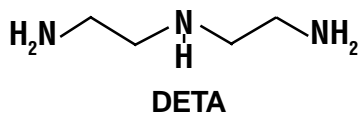




Diethylenetriamine (DETA)

CAS #000111-40-0, N-(2-aminoethyl)-1,2-ethanediamine

Diethylenetriamine (DETA)



Diethylenetriamine (CAS #000111-40-0, N-(2-aminoethyl)-1,2-ethanediamine) is the next to the lowest molecular weight product containing two primary and one secondary nitrogen. Clear and colorless with an ammonia-like odor, DETA is a single-component product.

Applications

- Asphalt Additives
- Chelating Agents
- Corrosion Inhibitors
- Drainage Aids
- Epoxy Curing Agents
- Fabric Softeners
- Lube Oil & Fuel Additives
- Mineral Processing Aids
- Polyamide Resins
- Surfactants
- Textile Additives
- Paper Wet-Strength Resins

Typical Physical Properties of Diethylenetriamine (DETA)

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

Property	SI Units
Molecular Weight (Linear component)	103.17
(Typical product)	103.2
Boiling Point @ 760 mm Hg, °C	206.9
Freezing Point, °C	-39
Density, g/ml @ 20°C	0.953
Specific gravity 20°/20°	0.952
Viscosity, cp @ 20°C	7.16
Kinematic viscosity, cst @ 25°C	5.8
Kinematic viscosity, cst @ 40°C	3.7
Vapor pressure @20°C, mm Hg	0.08
Specific heat, cal/g °C @ 20°C	0.65
Thermal conductivity, cal/cm-sec-°C @ 20°C	0.000523
Surface tension, dynes/cm @ 20°C	41.8
Coefficient of expansion, 1/°C @ 20°C	0.00106
Refractive index @ 20°C	1.483
Dielectric constant @ 23°C and 1 kHz	12.2
Electrical conductivity, μmhos/cm @ 25°C	0.86
Heat of formation, 25°C BTU/lb	-403
Heat of vaporization, @ 760 mm Hg, °C, BTU/lb	197
Heat of combustion, BTU/lb 25°C	-13910
Ionization constants, K1 @ 25°C	0.65x10 ⁻⁴
pH of 1 wt% solution	11.6
Nitrogen content, wt.%	40.6
Amine value, mg KOH/g	1626

Diethylenetriamine (DETA)

CAS #000111-40-0, N-(2-aminoethyl-1,2-ethanediamine)

Product Stewardship

The Dow Chemical Company has a fundamental concern for all who make, distribute, and use our family of ethyleneamine products, and the environment we share. This concern is the basis for our Product Stewardship philosophy, by which we assess all available information on our products and then take appropriate steps to protect employee and public health and the environment. In addition, Dow is committed to implementing the guiding principles and management practices of the chemical industry's Responsible Care[†] initiative, which includes Product Stewardship as one of the Management Practices. As part of our Product Stewardship effort, information such

as Material Safety Data Sheets and literature on DOW ethyleneamines are provided to assist customers in handling our ethyleneamine products in a safe and responsible manner. Additional information available for our ethyleneamine customers in two brochures: "Ethyleneamines" and "Ethyleneamines: Safe Storage and Handling."

NOTE: Consult the current Material Safety Data Sheet for safety and handling guidelines for this product.

[†]Service mark of The American Chemistry Council

**The Dow Chemical Company
Midland, Michigan 48674 U.S.A.**

In the United States And Canada: 1-800-447-4369; Fax 1-989-832-1465

In Europe: Toll free phone +800 3 694 6367*; Telephone +32 3 450 2240; Fax: + 32 3 450 2815

In The Pacific: +852 2879 7260; Fax +852 2827 5881

In Other Global Areas: 1-989-832-1556; Fax: 1-989-832-1465

*Toll free from Austria (00), Belgium (00), Denmark (00), Finland (990), France (00), Germany (00), Hungary (00), Ireland (00), Italy (00), The Netherlands (00), Norway (00), Portugal (00), Spain (00), Sweden (00), Switzerland (00) and the United Kingdom (00).

NOTICE: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

Published October 2001

