



# Ethylenediamine (EDA)

CAS #000107-15-3, 1,2-diaminoethane

## Ethylenediamine (EDA)



Ethylenediamine (CAS #000107-15-3, 1,2-diaminoethane) is the lowest molecular weight ethylenediamine. It is a single-component product with two primary nitrogens. It has an ammonia-like odor and is clear and colorless.

## Applications

- Bleach Activator
- Chelating Agents
- Corrosion Inhibitors
- Elastomeric Fibers
- Fungicides
- Fuel Additives
- Mineral Processing Aids
- Pharmaceutical Intermediate
- Plastic Lubricants
- Polyamide Resins
- Rubber Processing additives
- Textile Additives
- Urethane Chemicals

## Typical Physical Properties of Ethylenediamine (EDA)

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

Property	SI Units
Molecular Weight	
(Linear component)	60.10
(Typical product)	60.1
Boiling Point @ 760 mm Hg, °C	117
Freezing Point, °C	11
Density, g/ml @ 20°C	0.897
Specific gravity 20°/20°	0.898
Viscosity, cp @ 20°C	1.8
Kinematic viscosity, cst @ 25°C	1.7
Kinematic viscosity, cst @ 40°C	1.2
Vapor pressure @20°C, mm Hg	10.40
Specific heat, cal/g °C @ 20°C	0.68
Thermal conductivity cal/cm-sec-°C @ 20°C	0.000614
Surface tension, dynes/cm @ 20°C	42
Coefficient of expansion, per degree centigrade @ 20°C	0.000108
Refractive index @ 20°C	1.457
Dielectric constant @ 23°C and 1 kHz	13.3
Electrical conductivity, μmhos/cm @ 25°C	7.52
Heat of formation, 25 °C BTU/lb	-569
Heat of vaporization @ 760 mm Hg, BTU/lb	270
Heat of combustion, BTU/lb, 25°C	-13251
Ionization constant, K1 @ 25 °C	0.73x10 <sup>-4</sup>
pH of 1 wt.% solution	11.7
Nitrogen content, wt. %	46.6
Amine value, mg KOH/g	1860

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## 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<sup>†</sup> 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.

<sup>†</sup>Service mark of The American Chemistry Council

## The Dow Chemical Company

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