

931 (DETA)

931 is a linear ethylene amine containing two primaries and one secondary nitrogen. DETA is a single-component product that is clear and colorless, with an ammonia-like odor.

Specific key data	Property	Specifications	Test method
	Appearance	Clear	
	Purity	>98.5%	ST-35.218
	Color, Pt-	30 max	ST-35.218
	Specific gravity, 25/25°C Water, wt. %	0.947– 0.951	ST-30.31
		0.5% max	ST-31.53, 6

Additional Information

Regulatory Information

DOT/TDG Classification	Diethylenetriamine
HMIS Code	3-1-0
WHMIS Classification	D2A, D2B, E
CAS Number	111-40-0

Chemical Control Laws

Canada, DSL	Listed
United States, TSCA	Listed

Typical Physical Properties

Amine value, mg KOH/g	1626
Boiling point, 760 mm Hg, °C (°F)	207 (405)
Coefficient of expansion, 1/°C, 20°C	0.00106
Density, g/ml, 20°C	0.952
Dielectric constant, 25°C and 1 kHz	12.0
Electrical conductivity, µmhos/cm, 24°C	0.32
Flash point, PMCC, °C (°F)	102 (215)
Freezing point, °C	- 39
Heat of formation, kcal/mol	- 17.3
Heat of vaporization, BTU/lb	194.8
Heat of combustion, BTU/lb	14008
Ionization constants, Kb 1	7.1E-5
Ionization constants, Kb 2, 25°C	5.2E-6
Kinematic viscosity, mPaS, 25°C	5.8
Kinematic viscosity, mPaS, 40°C	3.7
Molecular weight, Linear component	103.17
Molecular weight , Typical product	103.1
Nitrogen content, %	40.6
pH	12-13
Refractive index, 25°C	1.481
Specific gravity, 20/20°C	0.95
Specific heat, cal/g °C, 20°C	0.522
Surface tension, dynes/cm, 20°C	41.8

Thermal conductivity, cal/cm-sec-°C, 20°C	0.000523
Vapor pressure, mm Hg, 20°C	0.37
Viscosity, mPaS, 25°C (77°F)	4
Water solubility	>10

