

# Tetraethylenepentamine (TEPA)

N'-[2-[2-(2-aminoethylamino)ethylamino]ethyl]ethane-1,2-diamine

Tetraethylenepentamine (TEPA) is a yellowish liquid containing linear, branched and cyclic molecules. TEPA is commonly used as an additive in fuel and lubricating oil production, as an epoxy curing agent or in the manufacture of asphalt additives.

**CAS number**  
90640-66-7, 112-57-2  
(L-TEPA)

**EINECS/ELINCS No.**  
203-986-2 (L-TEPA)

**Molecular weight**  
189.31 (L-TEPA)

**Molecular formula**  
C<sub>8</sub>H<sub>23</sub>N<sub>5</sub> (L-TEPA)

## Specifications

Appearance (MOA 200)	Clear yellowish liquid
Assay, pentamines (MOA 507)	≥ 95.0 Area%
Color (MOA 201)	≤ 5 Gardner
Water (MOA 305)	≤ 0.5 wt%

## Characteristics

Form	Viscous liquid
Color	Yellow
Odor	Ammonical
Explosive properties	No
Flammability, liquids	Not classified as a flammability hazard
Oxidizing properties	No
Water solubility	Soluble
Solubility in other solvents	Acetone;Methanol
pH, 2% solution	11.8
Melting point/freezing point, 1013 hPa	< -20 °C
Boiling point/boiling range, 1013 hPa	375 °C
Flash point, 1013 hPa, closed cup	> 175 °C
Vapor pressure, 20°C	0.00019 hPa
Relative vapor density, air = 1.0	6.53
Density, 20°C	993 kg/m <sup>3</sup>
Relative density, 20°C	0.993
Partition coefficient, N-octanol/water, 20°C, log Pow	-3.16
Dynamic viscosity, 20°C	80 mPa.s

### Notes:

Methods of Analysis (MOA) are available upon request. In case of dispute, the listed Method of Analysis will be used as reference methods.

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