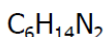


DYTEK® 1,2-Diaminocyclohexane (DCH-99)

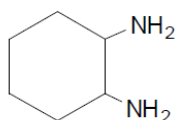
1,2-Diaminocyclohexane



Product Description

DYTEK® 1,2-Diaminocyclohexane (DCH-99) is a cyclic aliphatic diamine used in a variety of applications, including urethanes and epoxies.

DYTEK® DCH-99 amine is a mixture of cis- and trans-isomers and a clear liquid at room temperature with an amine-like odor.



Applications

- Chelating agent
 - Oilfield
 - Textiles
 - Water treatment
 - Detergents
- Epoxy curing agents
 - Composites
 - Flooring/paving
- Herbicide intermediates
- Polyamide resin
 - Adhesives
 - Coatings
 - Films
 - Plastics
 - Inks
- Polyurethane/Polyurea
 - Extenders
 - Catalysts
- Scale/corrosion inhibitors
- Ore Flotation

Typical Composition (wt %)

1,2-Diaminocyclohexane*	99.0
2-Methylpentamethylenediamine	0.1
Hexamethylenediamine	0.1
Water	0.1
Color (APHA)	15
Appearance	Clear and free of suspended materials

* Approximately 30% cis and 70% trans

General Information

CAS Registry	694-83-7
Molecular Weight	114
Hydrogen Equivalent Weight	28.5
Amine Value (mg KOH/g)	967
Melting Point, °C (°F)	Cis 2 (36) Trans 15 (59)
Boiling Point (760 mm Hg), °C (°F)	191 (376)
Vapor Pressure (mm Hg, 20°C)	0.387
Antoine Equation ($p = \text{mm Hg}$, $T = ^\circ\text{C}$)	
$\ln(p) = 16.38 - \frac{3821}{200.4 + T}$	
Flash Point (Closed Cup), °C (°F)	75 (167)
Specific Gravity, 20 °C (68 °F)	0.94
Refractive Index (cis, n_D^{25})	1.487
Solubility (H ₂ O)	Miscible
Critical Properties (estimated)	
P_c , atm	43.4
V_c , mL	361.5
T_c , °C	409.2
Hansen Solubility Parameters	
δ	11
δ_d	8.6
δ_p	3.5
δ_H	5.8
Volatiles (%)	100
Heat of Vaporization (cal/g @ 185 °C)	106
pH, 5% Aqueous Solution	12
pK_{a1} , 30 °C (86 °F)	9.6
pK_{a2} , 30 °C (86 °F)	6.1
Viscosity (cP, 21 °C, 70 °F)	7.2

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For Samples and Information:

INVISTA Specialty Intermediates

www.DYTEK.INVISTA.com

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