DJCHEM CHEMICALS POLAND S. A.

05-200 Wołomin, ul. Łukasiewicza 11 A

ISO 9001
ZETOM-CERT

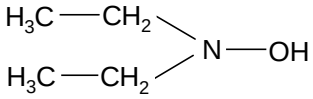
DEHA 99

Specification number: DEHA99-012009

1. Chemical description:

Chemical name: N,N-Diethylohydroxyloamine 99

Chemical formula: $(C_2H_5)_2NOH$



No CAS: 3710-84-7

No EINECS: 223-055-4

2. Typical properties:

Appearance at 20° C: Colourless to light yellow liquid

Molecular weight: 89,1 g / mol

Vapour pressure at 25° C: 33 hPa

Solubility in water at 20°C: Complete below 35 % and above 85 %

Initial boiling point at 760 mm Hg: 125° C (decomposition)

Flash point: 46° C

Freezing point: -6° C

Density at 20° C: 0,870 ± 0,005 g / cm^3

3. Specification values:

No.	Property	Unit	Specification		Test Method
			Min	Max	
1	DEHA content	wt. %	99,0	-	DJCHEM-201/00 (Titration) DJCHEM-203/04 (GC)
2	DEA content	wt. %	-	0,1	DJCHEM-203/04 (GC)
3	Water content	wt. %	-	0,5	DJCHEM-201/00 (Titration)
4	Density at 20° C	g / cm^3	0,865	0,875	ISO 758:1976
5	Phase separation volume < 20° C	%	-	0	Visual
6	Colour	APHA	-	30	DJCHEM-204/04 ISO 6271:1997
7	Appearance	-	Clear without solids		Visual

Date: 27-10-2009 **Signature:**

HANDLING PRECAUTIONS

- DEHA is a harmful and flammable liquid
- DEHA can react violently with strong oxidants
- For further detailed information, please refer to Material Safety Data Sheet

APPLICATIONS

- Short stopper of polymerization in production of SBR/NBR and poly butadiene polymer. Polymers short stopped by DEHA are stable, and do not change their viscosity due to incomplete reaction and maintain their color.

- Polymerization inhibitor used as anti-popcorn agent in styrene/butadiene monomer production. Due to the inhibition of the formation of high cross-linked polymer, damage of equipment and pipes can be avoided.

- Water treatment chemical to avoid corrosion in water boilers by binding oxygen (Oxygen scavenger). This maximizes the energy use and life of the boiler system.

- Film development industry,where it is used as anti-oxidant in formulations for rapid development of color prints. It also acts as an initiator in the development process.

- DEHA acts as an inhibitor because it scavenges peroxides, oxygen and organic radicals. It is used as a colour stabilizer in polymers and fuel systems.

- Reagent for the selective reduction of quinones to quinols under mild conditions.

- A patent search also showed usage in the following applications:

- Preparation of phentyltetrahydrophthalimide herbicides.
- Catalyst in the formation of ceramic coatings from a ceramic precursor.
- Vulcanizing agent for silicone rubbers free of organometalic catalysts.
- Catalysts for hydrolysis of siloxanes in silicone rubber manufacturing.
- Anti-foulants and color for distillate fuel oils.
- Oxidizing agents for post-leaching kaolinite clays.
- Manufacture of room temperature curable sealants.