

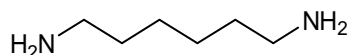
# DYTEK<sup>®</sup> Hexamethylenediamine (HMD)

## Hexamethylenediamine



### Product Description

A greater than 99.9% pure aliphatic diamine, available from 70–100 wt% concentrations in water (in Europe, product is also available as 60 wt% solution). Aqueous solutions of 60–80 wt% DYTEK<sup>®</sup> HMD are liquids. Higher concentrations are solids at room temperature, but shipped (bulk) as warm liquids.



### Applications

- Isocyanates
- Epoxy curing agents
- Petroleum additives
- Polyamide resins, adhesives, inks, fibers
- Scale and corrosion inhibitors
- Water treatment chemicals

### Typical Composition (wt %)

Hexamethylenediamine	60–100
Water	0.1–40
Color, APHA	2
1,2-Diaminocyclohexane, mpm*	4
2-Aminomethylcyclopentylamine, mpm	19
2-Methylpentamethylenediamine, mpm	3
Polarographically Reducible Impurities, mpm	8

\*moles per million moles

### General Information

CAS Name	1,6-Hexanediamine			
CAS Registry Number	124-09-4			
Molecular Weight	116.2			
	<u>HMD Concentrations, wt % *</u>			
	<b>70**</b>	<b>85</b>	<b>90</b>	<b>100</b>
Freezing Point, °C	6	24	30	41
Boiling Point, °C	—	—	—	204
Initial Boiling Point, °C	111.5	122.3	129.5	—
Specific Gravity, 25°C	0.929	0.900	0.889	0.854
Density, 25°C, lb/gal	7.74	7.47	7.38	7.09
Flash Point (COC), °C	116	107	102	85
Vapor Pressure, mmHg, 60°C, 100% HMD	3			
Solubility in Water, 30°C, g/100 g, 100% HMD	960			
Heat of Solution in Water, 43.8°C, kcal/mol, 100% HMD	8.2			
pK <sub>a1</sub> , 25°C				11.02
pK <sub>a2</sub> , 25°C				10.24
pH, 5 wt% (aqueous)				12.4

\*\* Not available in Europe.

## Shipping Information

	<b>DYTEK<sup>®</sup> HMD Concentration (wt %)</b>			
<b>Grade</b>	<b>60*, 70**, 80</b>	<b>85</b>	<b>85-95</b>	<b>100</b>
<b>Shipping Name</b>	Hexamethylenediamine Solution	Hexamethylenediamine Solid		
<b>DOT/IMO Label</b>	Corrosive	Corrosive		
<b>UN Number</b>	1783	2280		
<b>Packaging Group</b>	II	III		
<b>Hazard Class</b>	8	8		
<b>Form</b>	Liquid	Solid at 20°C; shipped (bulk) as a warm liquid		
<b>Shipping Weights, lb, net</b>	175,000	175,000	175,000	175,000
<b>Tank Car</b>	45,000	45,000	45,000	45,000
<b>Tank Truck</b>	400 lb/181.44 kg	400 lb/181.44 kg	Not Available	380 lb/172.37 kg
<b>Drum</b>				

\* Only available in Europe.

\*\* Not available in Europe.

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**For Samples and Information:**  
**INVISTA Specialty Intermediates • (800) 231-0998**  
[www.DYTEK.INVISTA.com](http://www.DYTEK.INVISTA.com)

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