

## DIMETHYLAMINE (DMA)

<b>CAS NO.</b>	:	124-40-3																								
<b>NATURE</b>	:	It is available as Anhydrous (liquified gas under pressure) & 40%, 50% & 60% solutions (Clear, Colourless Liquid)																								
<b>PHYSICAL PROPERTIES</b> (FOR ANHYDROUS)	:	<table border="0"> <tr> <td>Empirical Formula</td> <td>C<sub>2</sub>H<sub>7</sub>N</td> </tr> <tr> <td>Structural Formula</td> <td>(CH<sub>3</sub>)<sub>2</sub>NH</td> </tr> <tr> <td>Molecular Wt.</td> <td>45.08</td> </tr> <tr> <td>Refractive Index</td> <td>1.347</td> </tr> <tr> <td>Colour (APHA) Max.</td> <td>15</td> </tr> <tr> <td>Solubility in Water</td> <td>Soluble</td> </tr> <tr> <td>Autoignition Temperature</td> <td>402°C</td> </tr> <tr> <td>Flammability Limits</td> <td></td> </tr> <tr> <td></td> <td>LEL 2.8 vol%</td> </tr> <tr> <td></td> <td>HEL 14.4 vol%</td> </tr> <tr> <td>Critical Temperature</td> <td>164.6°C</td> </tr> <tr> <td>Critical Pressure</td> <td>51.7 Atm.</td> </tr> </table>	Empirical Formula	C <sub>2</sub> H <sub>7</sub> N	Structural Formula	(CH <sub>3</sub> ) <sub>2</sub> NH	Molecular Wt.	45.08	Refractive Index	1.347	Colour (APHA) Max.	15	Solubility in Water	Soluble	Autoignition Temperature	402°C	Flammability Limits			LEL 2.8 vol%		HEL 14.4 vol%	Critical Temperature	164.6°C	Critical Pressure	51.7 Atm.
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	For Anhydr.		For 40% soln.			
Sp. Gravity at 25°C	00.649		00.892			
Boiling Point	06.9°C		54.0°C			
Freezing Point	-92.2°C		-37.00°C			
Flash Point	--		-18.00°C			
Vapour Pressure	°C	kg/cm <sup>2</sup>	°C	kg/cm <sup>2</sup>		
		20		1.7	20	0.3
		40		3.5	40	0.7
		60	6.2	60	1.4	

### SPECIFICATIONS

Content	Unit	Anhydrous	40% Solution
Purity	%	99.50 min	40.00 min
Water	%	00.20 max	59.79 max
Ammonia	%	00.02 max	00.01 max
Other Amines/NOI	%	00.50 max	00.20 max

### APPLICATION AREAS :

<b>PHARMACEUTICALS</b>	:	To manufacture Anaesthetics like Pentocaine based on Dimethyl Aminoethanol, Tranquilizers like Sparine and Local Anaesthetics like Tetracaine. Used to manufacture Antihistamines like Diphenhydramine, Mepyramine Maleate (Anthisan), Chlorpheniramine, Pheniramine. DMA is also used extensively in manufacturing of Antibacterial like Trimethoprim.
<b>AGROCHEMICALS</b>	:	As a raw material to manufacture Isoproturon, one of the most effective and widely used Systemic Weedicide. As a raw material in manufacturing Ziram (Zinc Dimethyldithiocarbamate), Thiram (Tera methyl thiram disulphide) and Sodium or Potassium dimethyldithiocarbamate, which are effective for protection of crops from pathogenic fungi. As and intermediate or catalytic agent to manufacture Aldicab (Temik) Systemic Insecticide to control insects, mites and nematodes. To manufacture Herbicides like 2,4-D & 2,4,5 T dimethylamine salts, urea derivatives like Diuron, Monuron, Chloroxuron and Fenuron etc.
<b>RAYON INDUSTRY</b>	:	Used as a modifier in the manufacture of Viscose Rayon Filament and Tere Cord, to improve the tensile strength.
<b>SOLVENTS</b>	:	As a raw material for the manufacture of powerful and versatile solvents like Dimethyl Acetamide (DMAC), Dimethyl formamide (DMF), Hexamethyl Phosphoramide used in acrylic fibre, pharmaceutical and other industries.
<b>RUBBER CHEMICALS</b>	:	As a raw material to manufacture Vulcanisation Accelerators such as Tetra Methyl Thiuram Disulphide (TMTDS), Zinc Dimethyldithiocarbamate, Sodium Dimethyl Dithiocarbamate and Potassium Dimethyl Dithiocarbamate.
<b>ION EXCHANGE</b>	:	Used in manufacture of water purification Ion Exchange Resins like Quaternary Ammonium Salts based on Chloromethylated Styrene copolymer and Dimethylamino Ethanol.
<b>DYES</b>	:	Used in the manufacture of Acid Dyes and Stibene Dyes.
<b>PROPELLANT</b>	:	As a raw material to manufacture 1,1-Dimethyl Hydrazines.
<b>MISC.</b>	:	Used to manufacture Emulsifying Agent like Dimethylaminoethanol, 2-Amino, 2-Methyl-1 Propanol, surfactant like Lauryl Dimethyl amine oxide and Quaternary Ammonium compounds, which act as germicides.
<b>PACKAGING</b>	:	Anhydrous & Aqueous Solutions are offered in bulk Road Tankers, Aqueous solutions is offered in 210 litre capacity UN Approved M.S. drums containing 170 kg net DMA 40% solution & 160 kg. net of DMA 50% solution. Small quantities of Anhydrous material can also be made available in cylinders provided by the customer on request.
<b>IMDG CLASS</b>	:	Anhydrous Class 2 Solution Class 3
<b>PACKING GROUPS PER:</b>		Solution II
<b>IMO</b>		
<b>UN No.</b>	:	Anhydrous 1032 Solutions 1160
<b>E C NUMBER</b>	:	204-697-4