

MONOMETHYLAMINE (MMA)

CAS NO.	:	74-89-5
NATURE	:	It is available as anhydrous (liquified gas under pressure) & 40% solution (Colourless liquid)
PHYSICAL PROPERTIES	:	Empirical Formula CH ₃ N
(FOR ANHYDROUS)	:	Structural Formula CH ₃ NH ₂
	:	Molecular Wt. 31.06
	:	Refractive Index 1.351
	:	Colour (APHA) Max 15
	:	Solubility in Water Soluble
	:	Autoignition Temperature 430°C
	:	Flammability Limits
	:	LEL 5 Vol%
	:	HEL 21 Vol%
	:	Critical Temperature 155.9°C
	:	Critical Pressure 73.6 Atm.

	For Anhydr.		For 40% soln.	
Sp. Gravity at 25°C		0.656		0.897
Boiling Point		-6.3°C		48°C
Freezing Point		-93.5°C		-38°C
Flash Point		--		-10°C
Vapour Pressure	°C	kg/cm ²	°C	kg/cm ²
	20	2.8	20	0.4
	40	5.8	40	0.9
	60	10.0	60	1.7

SPECIFICATIONS

Content	Unit	Anhydrous	40% Solution
Purity	%	99.50 min	40.00 min
Water	%	00.25 max	59.75 max
Ammonia	%	00.10 max	00.05 max
Other Amines/NOI	%	00.50 max	00.20 max

APPLICATION AREAS :

PHARMACEUTICALS	:	As an intermediate or catalytic agent for drugs like Adrenaline, Ephedrine and Pethidine. Vasodilators like Theophylline and Caffeine are manufactured from Dimethyl Urea derived from MMA.
AGRO CHEMICALS	:	As a raw material for manufacture of systemic insecticides like Dimethoate, Carbaryl and Carbofuron and fungicides like Sodium N-Methyl dithiocarbamate. As a raw material to manufacture Monomethylacetamide, an intermediate used to manufacture Monocrotophos one of the largest selling Insecticides.
CORROSION CONTROL	:	Methyldiethanolamine manufactured using MMA is used as a selective absorbent for H ₂ S gas during purification of petrochemicals in refineries.
PHOTOGRAPHIC CHEMICALS	:	Used in the manufacture of Photographic developer like N-Methyl P-Aminophenol sulphate, popularly known as METOL.
ROCKET FUEL	:	In manufacturing Monomethyl Hydrazine which is one of the ingredients of Rocket Fuel required for Space Reserch.
EXPLOSIVE	:	As a raw material to manufacture Explosive booster like Tetryl Unsymmetrical Dimethyl-Hydrazine and Explosive sensitisers like Monomethylamine Nitrate.
DYES	:	Used in the manufacture of Dyestuff intermediates like N-Methyl aniline, N-Methyl J Acid, Sarcosine and Anthraquinone derivatives.
SOLVENT	:	As a raw material to manufacture special solvent like N-Methyl-2-Pyrrolidone.
RUBBER CHEMICALS	:	Directly used as stabilising agent and preservative for Natural rubber latex.
PACKAGING	:	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 of MMA. Small quantities of anhydrous material can also be made available in cylinders provided by the customer on request.
IMDG CLASS	:	Anhydrous Class 2 Solution Class 3
PACKING GROUP AS PER IMO	:	Solution II
UN NO.	:	Anhydrous 1061 Solution 1235
E C NUMBER	:	200-820-0