

Dimethyl Amino Ethanol (DMAE)



PRODUCT IN FOCUS

Dimethyl Amino Ethanol (DMAE)

INTRODUCTION

Dimethylaminoethanol (DMAE) is a tertiary amine that is ethanolamine having two N-methyl substituents. It is clear & colourless to pale yellow liquid with ammoniacal odor. DMAE is stable at room temperature and is completely miscible with water as well as organic solvents such as alcohols and ethers. It decomposes at high temperatures.

It is a versatile chemical intermediate primarily used as a curing agent for polyurethane foams and epoxy resins. It is also used in large quantities for water treatment. DMAE is also utilized as an intermediate in the synthesis of pharmaceuticals, personal care products, dyes, corrosion inhibitors and surfactants, as well as a neutralizing agent in various industrial processes.

Manufacture

DMAE is typically produced by reacting ethylene oxide with dimethylamine under controlled temperature and pressure conditions. The reaction yields dimethylethanolamine, which is then purified by distillation to obtain the desired product purity.

Applications

The various industrial applications of DMAE include the following:

Pharmaceutical & Cosmetic Industry

- Commonly used in cosmetic topical formulations in skin tightening and anti-aging creams.
- Intermediate in the manufacture of certain active pharmaceutical ingredients such as antihistamines (e.g., diphenhydramine), local anaesthetics, and analgesics.
- Precursor for quaternary ammonium compounds.
- As a supplement form to boost brain health by raising acetylcholine levels.
- It is an analogue of Vitamin B Choline.

Water Treatment Chemicals

- Raw material for producing cationic flocculants
- As an additive to boiler water.

Coatings & Paint Industry

- Neutralizing agent in water-based paints.
- pH adjuster in coatings and resins.

Resins & Polymers

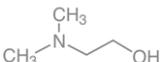
- Intermediate for ion-exchange resins.
- Used in production of polyurethane catalysts.

Agrochemical & Chemical Synthesis

- Intermediate for pesticides and specialty chemicals.
- Building block in organic synthesis.
- It is a precursor to chemicals such as the nitrogen mustard 2-dimethylaminoethylchloride.

Corrosion Inhibitor

- DMAE is widely used as a neutralizing amine corrosion inhibitor, particularly in boiler and steam condensate systems.

Synonyms	N,N-dimethylethanolamine; 2-dimethylaminoethanol
CAS no.	108-01-0
EINECS no.	203-542-8
Molecular formula	C ₄ H ₁₁ NO
Molecular weight	89.14
Structure	

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SPECIFICATIONS

Test	Unit	Specification
Appearance	-	Clear & Colourless to pale yellow liquid
Color (APHA)	APHA	NMT 30
pH (10% Solution)	-	10.5 - 12.0
Water content (By KF)	%	Max. 0.20
Other impurities (By GC)	%	Max. 00.30
Purity (By GC)	%	Min. 99.50

STORAGE & PRECAUTION

Store at ambient temperature

PACKING

190 kg UN approved HDPE drums

REACH Status

Registered

ExSyn offers Dimethyl Amino Ethanol (DMAE) on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality and service will make ExSyn your supplier of choice! If you need any additional information or SDS, please contact us.