

Safety Data Sheet

COMMISSION REGULATION (EU) NO 453/2010 OF 20 May 2010

Amending Regulation EC No 1907/2006

Revision No-03

Printing Date-06/10/2021 **Product Name** – Monomethylamine 30 % solution in Methanol

Rev. Date-06/10/2021

1. Identification Of the Substance**1.1 Product Identifier**

- **Product Name:** Monomethylamine 30 % solution in Methanol
- **Synonym:** Methylamine 30 % Methanolic solution
- **CAS No:** 74-89-5
- **EC No:** 200-820-0

Relevant Identified Uses of the substance or mixture and uses advised against: As an intermediate for chemical synthesis

Details of the Supplier of the Safety Data Sheet– **Manufacturer/supplier:**

Alkyl Amines Chemicals Ltd
401-407, Nirman Vyapa Kendra
Sect-17, Vashi, Navi Mumbai
India - 400703

Emergency Contact no- +91 020-66447814/27/01 **Mobile no -** +919881973507

Emergency Contact No for US only- +1 703 527 3887 / 800 424 9300

e-mail Address of the competent Person responsible for Safety Data Sheet:

rsattigeri@alkylamines.com

Information Dept: R&D

1.4 Emergency Telephone Numbers : As mentioned above

2. Hazard Identification**2.1 Classification of Substance or Mixture**

– **Classification According to EC regulation 1272/2008**



GHS02 Flame

Flammable Liquid Cat-2 H225 – Highly flammable liquid and vapour



GHS05 Corrosion

Skin Corrosion Cat- 1B H314- Causes severe skin burns and eye damage



Acute Toxicity Oral Cat-3 H301- Toxic if swallowed

Acute Toxicity Inhalation Cat-3 H331- Toxic if inhaled



STOT Single Exp Cat-3 H335- May cause respiratory irritation

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STOT Single Exposure Cat-1 H370-Causes damage to organs**2.2 Label Elements :****- Labelling according to EC Regulation No 1272/2008**

The substance is classified and labelled according to CLP Regulation

Hazard Pictograms**Signal word – Danger****Hazard Statements-****H225** Highly flammable liquid and vapour.**H314** Causes severe skin burns and eye damage.**H301** Toxic if swallowed.**H331** Toxic if inhaled.**H335** May cause respiratory irritation..**H370** Causes damage to organs**Precautionary statements-****Prevention:****P210** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**P260** Do not breathe dust/fume/gas/mist/vapours/spray.**P280** Wear protective gloves/protective clothing/eye protection/face protection.**Response:****P305+P351+P338 IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing**P303+P361+P353 IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower**P304+340: IF INHALED:** Remove victim to fresh air and Keep at rest in a position comfortable for breathing**P310** Immediately Call a POISON CENTER or doctor/physician.**Storage:****P403+P235:** Store in a well ventilated place. Keep cool**Disposal:****P501** Dispose of contents and container according to local, national, and international regulations.**3.Composition/Information on Ingredients****Other Ingredients**
Lachrymator. The substance is harmful to aquatic animals.

Results of PBT and vPvB assessment		CAS No	EC No	Content (% w/w)
PBT:	Not applicable.			
Monomethylamine		74-89-5	200-820-0	30.0 (min)
vPvB:	Not applicable			
Methanol		67-56-1	200-659-6	70.0 (max)

Molecular Formula – CH₅N (for monomethylamine)**Molecular Wt-** 31.0 g/mole (for monomethylamine)

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4. First- Aid Measures**--4.1 Description of first aid measures****- General information:**

Remove to fresh air immediately. Get medical attention immediately. Take off contaminated clothing and shoes immediately. If symptoms persist, call a physician.

-After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness bring patient into stable side position for transport.

-After skin contact:

Take off contaminated cloths immediately. Wash the portion with soap and plenty of water.. If skin irritation continues, consult a doctor.

- After eye contact: Rinse opened eye for several minutes under running water. Remove contact lenses .Use eye protection. Call Doctor immediately .

- After swallowing:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician..

- 4.2 Most important symptoms and effects, both acute and delayed

Lachrymator

Causes skin and eye burns

Inhalation of vapours may cause throat pain and cough. Victim may experience shortness of breath and suffocation.

- 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. Fire Fighting Measures**-5.1 Extinguishing media****Suitable extinguishing agents**

Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

- 5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x)

Carbon monoxide (CO) and Carbon dioxide (CO₂)

Can form explosive vapour-air mixtures. Vapours are heavier than air and may spread along the floor.

- 5.3 Advice for fire-fighters

- Protective equipment: Wear full protective and self-contained breathing apparatus.

- Additional information

Cool endangered containers with water spray jet.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

If without risk possible, move drums with material away from dangerous area.

6. Accidental release Measures**- 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Remove all ignition sources.

Use breathing protection against the effects of fumes/dust/aerosol.

Avoid contact with skin and eyes.

-6.2 Environmental precautions:

Damp down gases/fumes/haze with water spray jet.

Do not allow to enter drainage system, surface or ground water.

Inform respective authorities in case product reaches water or sewage system.

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Prevent material from reaching sewage system, holes and cellars.

- 6.3 Methods and material for containment and cleaning up:

Use explosion proof equipments

Wear self-contained breathing apparatus and protective suit.

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the material collected according to regulations.

- 6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

7. Handling and Storage**-7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level (fumes are heavier than air).

Restrict the quantity stored in the work place.

Do not inhale vapours/aerosols.

Avoid skin and eye contact under any circumstances.

· Information about protection against explosions and fires:

Fumes can combine with air to form an explosive mixture.

Flammable fume/air mixtures may be formed in empty containers.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- 7.2 Conditions for safe storage, including any incompatibilities**· Storage****· Requirements to be met by storerooms and containers:**

Store under shed at ambient temperature and dry conditions in well sealed container

Observe regulations for storage of flammable liquids.

Observe all local and national regulations for storage of water polluting products

· Information about storage in one common storage facility:

Observe regulations for storage of flammable liquids.

· Further information about storage conditions:

Protect from heat and direct sunlight.

Store container in a well ventilated position.

Protect from overexposure to light.

Protect from humidity and keep away from water.

Store in a locked cabinet or with access restricted to specifically instructed persons.

- 7.3 Specific end use(s) Refer section 1.**8. Exposure Control/Personal Protection****- Additional information about design of technical systems:** No further data; see item 7.**- 8.1 Control parameters****Chemical Name**

Monomethylamine	OSHA PEL	10 ppm/12 mg/M3 TWA
	NIOSH REL	10 ppm/12 mg/M3 TWA
	ACGIH TLV	5 ppm/6.4 mg/M3

Methanol

OSHA PEL	200 ppm/260 mg/m3 TWA [skin].
NIOSH REL	200 ppm/260 mg/m3 TWA
ACGIH TLV	200 ppm/262 mg/m3 TWA

8.2 Exposure controls

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-Personal protective equipment**- General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Do not eat, drink or smoke while working.

Instantly remove any contaminated garments.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Wash hands during breaks and at the end of the work.

- Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

- Protection of hands:

Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check the permeability prior to each renewed use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material must be on consideration of the penetration times, rates of diffusion and the degradation.

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

-Recommended Material of gloves: Nitrile rubber, styrene-butadiene rubber, Neoprene, PVC**- Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection: Tightly sealed safety glasses**- Body protection:**

Antistatic protective clothing

Use protective suit.

Body protection must be chosen depending on activity and possible exposure.

9. Physical and Chemical Properties**-9.1 Information on basic Physical and Chemical Properties****General Information-**

Appearance/Physical state /colour	Colourless liquid
Explosive limit Upper lower	No data available
Odour	ammonia like
Vapour pressure	No data available
Odour Threshold	No data available
Vapour density	No data available
PH (10% in water)	No data available
Sp.Gravity	0.768 @ 20°C
Melting point/freezing point	No data available
Solubility in water	Soluble
Boiling Range	44-67 °C
Flash Point	<-5°C
Evaporation Rate	No data available
Flammability (solid, gas)	Not Applicable
Partition Coefficient : n-Octanol Water	No data available
Auto ignition Temperature	No data available
Decomposition temperature	No data available

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Viscosity- dynamic	No data available
Kinematic	
Danger of Explosion	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
-9.2 Other Information- Not applicable	

10. Stability and Reactivity**-10.1 Reactivity****- 10.2 Chemical stability:**

Stable under normal conditions. No hazardous polymerization occurs.

- Thermal decomposition / conditions to be avoided:

Avoid impact, friction, heat, sparks, electrostatic charges .Light

- 10.3 Possibility of hazardous reactions

Flammable vapour-air mixtures may develop.

Used empty containers may contain product gases which form explosive mixtures with air.

Exothermic reaction with acids

Possibility of formation of nitrosamines with nitrites or other nitrosating agents

- 10.4 Conditions to avoid :

Avoid static electricity discharge . Handle under nitrogen , protect from moisture.

- 10.5 Incompatible materials:

Strong oxidizing agents

Strong acids

Halogenated Hydrocarbons

Mercury , Zn and Cu

- 10.6 Hazardous decomposition products:Nitrogen oxides (NO_x)Carbon monoxide (CO) and Carbon dioxide (CO₂)

Nitrosamine , ammonia

11. Toxicological Information**-11.1 Information on Toxicological effects****Acute Toxicity –****LD50/LC50 value that are relevant for classification****LD50 Oral (rat)** No data available**LD50 Dermal (Rat)** No data available**LC50 inhalation , 4 hrs Rat** No data available**Skin corrosion/irritation** Corrosive**Rabbit****Serious eye damage/eye irritation** Corrosive**Respiratory/skin sensitization** No effects known**Germ cell mutagenicity** No mutagenic effects known**Carcinogenicity** IARC- No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**Reproductive Toxicity** No teratogenic effects known**Specific Target organ systemic Toxicity** No information available**Toxicity****Additional Toxicological Information-**

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No information available.

12. Ecological Information**-12.1 Toxicity****-Aquatic toxicity:**Toxicity to Fish , LC50 – *Leuciscus idus*

No data available

No data available

Toxicity to *Daphnia* and other invertebrates
(*Daphnia Magna*) EC50

No data available

Toxicity to algae (green algae)

No data available

-12.2 Persistence and degradability

Substance is readily biodegradable.

-12.3 Bioaccumulative potential

BCF – 3.16.(for monomethylamine)

-12.4 Mobility in soil No further relevant information available.**-Additional ecological information:****-General notes:** Water hazard class 2 – Hazardous to water (classification according to Administrative Regulation)**-12.5 Results of PBT and vPvB assessment****-PBT:** Not applicable.**-vPvB:** Not applicable.**-12.6 Other adverse effects :** Not known based on available information.**13. Disposal Consideration****-13.1 Waste treatment methods****-Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Waste disposal key number: According to local/national regulations.**-European waste catalogue:**

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

-- Uncleaned packagings:**-Recommendation:** Disposal must be made according to official regulations.**14. Transport Information****-14.1 UN Number**
ADR , IMDG , IATA

UN 3286

-14.2 UN Proper Shipping Name
ADR

IMDG ,IATA

3286, Flammable liquid, Toxic, Corrosive
N.O.S (Methanol, Monomethylamine)**-14.3 Transport Hazard Class**
ADR

Class

3

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Label	3+6.1+8
IMDG , IATA  Class Label	 I 3+6.1+8
-14.4 Packing Group ADR , IMDG , IATA	II
-14.5 Environmental Hazard Marine Pollutant	No
-14.6 Special Precautions For User	Warning: Flammable and toxic material

15. Regulatory Information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Decree to be applied in case of technical fault:**
Quantity limits according to "EC Seveso directive" should be observed.
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water
- **Other regulations, limitations and prohibitive regulations**
Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16. Other Information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

Dept Issuing MSDS- R&D**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the

International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

TWA : Time weighted Average

STEL : Short term exposure limit

AXGIH: American Conference of Government Industrial Hygienist

Ref-

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- 1) Regulation (EC) No 1272/2008 of the European Parliament and of the Council
- 2) Guidance on the compilation Safety Data Sheet published by ECHA Ver. 2.1 Feb 2014
- 3) European Chemicals Agency, <http://echa.europa.eu/>
- 4) Toxnet HSDB
- 5) NIOSH Pocket Guide
- 6) US National Library of Medicine
- 7) GESTIS Substance Data Base
- 8) www.cdc.gov , International Chemical safety cards (for Methylamine)
- 9) Sittig's Handbook of Toxic and Hazardous chemicals and Carcinogens