

## Safety Data Sheet

COMMISSION REGULATION (EU) NO 2015/830 OF 1<sup>st</sup> June 2015

Amending Annex II of Regulation EU No 453/2010

Revision No-06

Printing Date-25/08/2020 Product Name – Monomethylamine 25 % solution in Methanol Rev. Date-24/08/2020

## 1. Identification Of the Substance

### 1.1 Product Identifier

- **Product Name:** Monomethyl amine 25 % solution in Methanol
- **Synonym:** Methylamine 25 % Methanolic solution
- **CAS No:** 74-89-5
- **EC No:** 200-820-0

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

### 1.3 Details of the Supplier of the Safety Data Sheet

– **Manufacturer/supplier:**

Alkyl Amines Chemicals Ltd  
401-407 ,Nirman Vyapar Kendra, Plot No 10  
Sect-17, Vashi, Navi Mumbai  
India - 400703

**Emergency Contact no-Patalganga:+91 2192 664305/664329 Mobile no:+919881973507/+919423093443**

Dahej:+91 7202866622 / 7573066622

**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](mailto: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**



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**STOT Single Exp Cat-3 H335-** May cause respiratory irritation**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/container in accordance with local/regional/national/international regulations.**Other hazards**

The substance is harmful to aquatic animals.

**Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable**3. Composition/Information on Ingredients**

Description	CAS No	EC No	Content (% w/w)
Monomethylamine	74-89-5	200-820-0	25.0 (min)
Methanol	67-56-1	200-659-6	75.0 (max)

**Molecular Formula** – CH<sub>5</sub>N ( for monomethylamine)**Molecular Wt-** 31.0 g/mole (for monomethylamine)**4. First- Aid Measures****--4.1 Description of first aid measures**

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**- 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 (CO<sub>2</sub>), 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<sub>x</sub>)

Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>)

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.

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.

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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 shade at ambient temperature (<45°C) & dry conditions in well-sealed containers.

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 place.

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

**-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.

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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-

<b>Appearance/Physical state /colour</b>	Colourless liquid
<b>Explosive limit Upper lower</b>	No data available
<b>Odour</b>	ammonia like
<b>Vapour pressure</b>	No data available
<b>Odour Threshold</b>	No data available
<b>Vapour density</b>	No data available
<b>PH (10% in water)</b>	No data available
<b>Sp.Gravity</b>	0.773 0@ 20°C
<b>Melting point/freezing point</b>	No data available
<b>Solubility in water</b>	Soluble
<b>Boiling Range</b>	49-67 °C
<b>Flash Point</b>	<-5°C
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Partition Coefficient : n-Octanol Water</b>	No data available
<b>Auto ignition Temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Viscosity- dynamic Kinematic</b>	No data available
<b>Danger of Explosion</b>	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

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-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<sub>x</sub>)

Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>)

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 Corrosive

irritation

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 No information available

Toxicity

Additional Toxicological Information-

No information available.

## 12. Ecological Information

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**-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.

**-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 packaging:**

**-Recommendation:** Disposal must be made according to official regulations. Drum decontamination shall be done by rinsing with 5% aqueous acetic acid solution followed by aqueous washes till neutral PH.

It is strongly recommended to disfigure the container/drum before disposal.

### 14. Transport Information

	Section	ADR	IATA	IMDG
<b>UN Number</b>	14.1	3286	3286	3286
<b>UN Proper Shipping Name</b>	14.2	<b>3286, Flammable liquid, Toxic, Corrosive N.O.S (Methanol, Monomethylamine)</b>	<b>3286, Flammable liquid, Toxic, Corrosive N.O.S (Methanol, Monomethylamine)</b>	<b>3286, Flammable liquid, Toxic, Corrosive N.O.S (Methanol, Monomethylamine)</b>
<b>Transport Hazard Class (es)</b>	14.3	3	3	3
<b>Subsidiary Risk</b>		6.1+8	6.1+8	6.1+8
<b>Packing Group</b>	14.4	II	II	II
<b>Environmental Hazard/Marine Pollutant</b>	14.5	No	No	No
<b>Special Precautions for User</b>	14.6	No data available	No data Available	Flammable Substance
<b>ADR Tunnel restriction code</b>		1(C/E)	Not Applicable	Not Applicable
<b>Classification code</b>		FTC	Not Applicable	Not Applicable

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HIN		368	Not Applicable	Not Applicable
EMs		Not Applicable	Not Applicable	F-E, S-C
<b>Transportation in Bulk according to Annex II of Marpol and IBC code</b>	14.7	Not Applicable	Not Applicable	As detailed below
Product Name		Not Applicable	Not Applicable	Methyl Alcohol/Methylamine solution
Ship Type		Not Applicable	Not Applicable	2
Pollution Category		Not Applicable	Not Applicable	Y

## 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**

**Only Representative : Global Product Compliance (Europe)AB, Lund , Sweden**

**e-mail:** sk@reach-onlyrep.eu info@gpcregulatory.com

**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-**

- 1) Regulation (EC)No 1272/2008 of the European Parliament and of the Council
- 2) Guidance on the compilation Safety Data Sheet publish by ECHA Ver. 2.1 Feb 2014
- 3) European Chemicals Agency, <http://echa.europa.eu/>



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- 4) *Toxnet HSDB*
- 5) *NIOSH Pocket Guide*
- 6) *US National library of Medicine*
- 7) *GESTIS Substance Data Base*
- 8) *[www.cdc.gov](http://www.cdc.gov) , International Chemical safety cards (for Methylamine)*
- 9) *Sittig's Handbook of Toxic and Hazardous chemicals and Carcinogens*
- 10) *Transport Regulations : ADR, IMDG, IATA*