

SAFETY DATA SHEET

Creation Date 03-Dec-2010

Revision Date 25-Dec-2021

Revision Number 6

1. Identification

Product Name Dimethylamine, 2M solution in methyl alcohol

Cat No. : AC370260000; AC370261000; AC370268000

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|--------------|
| Flammable liquids | Category 2 |
| Acute oral toxicity | Category 3 |
| Acute dermal toxicity | Category 3 |
| Acute Inhalation Toxicity - Vapors | Category 3 |
| Skin Corrosion/Irritation | Category 1 B |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Specific target organ toxicity (single exposure) | Category 1 |
| Target Organs - Respiratory system, Central nervous system (CNS), Optic nerve. | |

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor

Causes severe skin burns and eye damage
 May cause respiratory irritation
 Causes damage to organs
 Toxic if swallowed, in contact with skin or if inhaled



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Keep cool

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

Rinse mouth
 Do NOT induce vomiting

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other hazards

Poison, may be fatal or cause blindness if swallowed. Vapor harmful. CANNOT BE MADE NON-POISONOUS.
 WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

| Component | CAS No | Weight % |
|--------------------|----------|----------|
| Methyl alcohol | 67-56-1 | 88 |
| di-methylamine...% | 124-40-3 | 12 |

4. First-aid measures

| | |
|--|--|
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Inhalation | If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Most important symptoms and effects | Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Carbon dioxide (CO ₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers. CO ₂ , dry chemical, dry sand, alcohol-resistant foam. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 5 °C / 41 °F |
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
3

Instability
0

Physical hazards
N/A

6. Accidental release measures

| | |
|---|--|
| Personal Precautions | Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges. |
| Environmental Precautions | Should not be released into the environment. |
| Methods for Containment and Clean Up | Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. |

7. Handling and storage

| | |
|-----------------|---|
| Handling | Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges. |
| Storage. | Keep away from heat, sparks and flame. Flammables area. Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Bases. Strong oxidizing agents. |

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|--------------------|---------------------------------------|--|--|-------------------------------|
| Methyl alcohol | TWA: 200 ppm STEL: 250 ppm Skin | (Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³ | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ | TWA: 200 ppm STEL: 250 ppm |
| di-methylamine...% | TWA: 5 ppm STEL: 15 ppm | (Vacated) TWA: 10 ppm (Vacated) TWA: 18 mg/m ³ TWA: 10 ppm TWA: 18 mg/m ³ | IDLH: 500 ppm TWA: 10 ppm TWA: 18 mg/m ³ | TWA: 5 ppm STEL: 15 ppm |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

| | |
|-----------------------------|---|
| Engineering Measures | Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. |
|-----------------------------|---|

Personal Protective Equipment

| | |
|---------------------------------|---|
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|---|---------------------------------|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | No information available |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | No data available |
| Boiling Point/Range | No information available |
| Flash Point | 5 °C / 41 °F |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | No information available |
| Vapor Density | No information available |
| Specific Gravity | 0.775 |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Viscosity | No information available |
| Molecular Formula | C ₂ H ₇ N |
| Molecular Weight | 45.08 |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. |
| Incompatible Materials | Bases, Strong oxidizing agents |
| Hazardous Decomposition Products | Nitrogen oxides (NO _x), Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information**Acute Toxicity****Product Information**

| | |
|--------------------|-------------------------------------|
| Oral LD50 | Category 3. ATE = 50 - 300 mg/kg. |
| Dermal LD50 | Category 3. ATE = 200 - 1000 mg/kg. |
| Vapor LC50 | Category 3. ATE = 2 - 10 mg/l. |

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------|--------------------------------|-------------------------------|--------------------------------|
| Methyl alcohol | LD50 = 1187 – 2769 mg/kg (Rat) | LD50 = 17100 mg/kg (Rabbit) | LC50 = 128.2 mg/L (Rat) 4 h |
| di-methylamine...% | LD50 = 698 mg/kg (Rat) | LD50 = 3900 mg/kg (Rat) | LC50 = 7340 ppm (Rat) 20 min |

Toxicologically Synergistic No information available**Products****Delayed and immediate effects as well as chronic effects from short and long-term exposure**

| | |
|------------------------|--|
| Irritation | Causes burns by all exposure routes |
| Sensitization | No information available |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|--------------------|----------|------------|------------|------------|------------|------------|
| Methyl alcohol | 67-56-1 | Not listed | Not listed | Not listed | Not listed | Not listed |
| di-methylamine...% | 124-40-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system Central nervous system (CNS) Optic nerve
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains. .

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|--------------------|---|--|---|---|
| Methyl alcohol | Not listed | Pimephales promelas: LC50 > 10000 mg/L 96h | EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min | EC50 > 10000 mg/L 24h |
| di-methylamine...% | EC50: = 9 mg/L, 96h (Pseudokirchneriella subcapitata) | LC50: = 396 mg/L, 96h static (Brachydanio rerio) LC50: 127 - 349 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 210 mg/L, 96h static (Poecilia reticulata) LC50: = 120 mg/L, 96h static (Oncorhynchus mykiss) LC50: 111 - 125 mg/L, 96h (Oncorhynchus mykiss) | Not listed | EC50: = 88.7 mg/L, 48h (Daphnia magna Straus) |

Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|--------------------|---------|
| Methyl alcohol | -0.74 |
| di-methylamine...% | -0.274 |

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

| Component | RCRA - U Series Wastes | RCRA - P Series Wastes |
|-------------------------------|------------------------|------------------------|
| Methyl alcohol - 67-56-1 | U154 | - |
| di-methylamine...% - 124-40-3 | U092 | - |

14. Transport information

DOT

UN-No UN3286
Proper Shipping Name Flammable liquid, toxic, corrosive, n.o.s.
Technical Name (Dimethylamine, 2M Sol. in methyl alcohol)
Hazard Class 3
Subsidiary Hazard Class 6.1; 8
Packing Group II

TDG

UN-No UN3286
Proper Shipping Name Flammable liquid, toxic, corrosive, n.o.s.
Hazard Class 3
Subsidiary Hazard Class 6.1; 8
Packing Group II

IATA

UN-No UN3286
Proper Shipping Name FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.*
Hazard Class 3
Subsidiary Hazard Class 6.1, 8
Packing Group II

IMDG/IMO

UN-No UN3286
Proper Shipping Name Flammable liquid, toxic, corrosive, n.o.s.
Hazard Class 3
Subsidiary Hazard Class 6.1, 8
Packing Group II

15. Regulatory information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--------------------|----------|------|---|-----------------------------|
| Methyl alcohol | 67-56-1 | X | ACTIVE | - |
| di-methylamine...% | 124-40-3 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|--------------------|----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Methyl alcohol | 67-56-1 | X | - | 200-659-6 | X | X | X | X | X | KE-23193 |
| di-methylamine...% | 124-40-3 | X | - | 204-697-4 | X | X | X | X | X | KE-11124 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

| Component | CAS No | Weight % | SARA 313 - Threshold Values % |
|--------------------|----------|----------|-------------------------------|
| Methyl alcohol | 67-56-1 | 88 | 1.0 |
| di-methylamine...% | 124-40-3 | 12 | 1.0 |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| di-methylamine...% | X | 1000 lb | - | - |

Clean Air Act

| Component | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|----------------|-----------|-------------------------|-------------------------|
| Methyl alcohol | X | | - |

OSHA - Occupational Safety and Health Administration

OSHA - United States Occupational Safety and Health Administration

| Component | Specifically Regulated Chemicals | Highly Hazardous Chemicals |
|--------------------|----------------------------------|----------------------------|
| di-methylamine...% | - | TQ: 2500 lb |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|--------------------|--------------------------|----------------|
| Methyl alcohol | 5000 lb | - |
| di-methylamine...% | 1000 lb | - |

California Proposition 65

This product contains the following Proposition 65 chemicals.

| Component | CAS No | California Prop. 65 | Prop 65 NSRL | Category |
|----------------|---------|---------------------|--------------|---------------|
| Methyl alcohol | 67-56-1 | Developmental | - | Developmental |

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------------|---------------|------------|--------------|----------|--------------|
| Methyl alcohol | X | X | X | X | X |
| di-methylamine...% | X | X | X | - | X |

U.S. Department of Transportation

Reportable Quantity (RQ): Y
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

| Component | DHS Chemical Facility Anti-Terrorism Standard |
|--------------------|---|
| di-methylamine...% | Release STQs - 1000lb |

Other International Regulations

Mexico - Grade

No information available

Authorisation/Restrictions according to EU REACH

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------------|---|---|---|
| Methyl alcohol | - | Use restricted. See item 69. (see link for restriction details) | - |
| di-methylamine...% | - | Use restricted. See item 75. (see link for restriction details) | - |

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------------|----------|----------|------------------------------|---------------------------|--|
| Methyl alcohol | 67-56-1 | Listed | Not applicable | Not applicable | Not applicable |
| di-methylamine...% | 124-40-3 | Listed | Not applicable | Not applicable | Not applicable |

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--------------------|----------|---|--|----------------------------|------------------------------------|
| Methyl alcohol | 67-56-1 | 500 tonne | 5000 tonne | Not applicable | Not applicable |
| di-methylamine...% | 124-40-3 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other information

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Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS