



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : Dimethylamine 40% aqueous solution
Cat No.: AC408000000; AC408000010; AC408000050
CAS No. : 124-40-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended uses : Laboratory chemicals
Uses advised against: Food, drug, pesticide or biocidal product use.

1.3 Details of the supplier of the safety data sheet

Company : Krishna Solvechem Limited.
B/503, Sahayog, S. V. Road,
Kandivali (West), Mumbai – 400067. India.
Telephone : +91-22-6123 0222
Email : exports@kscl.co.in

1.4 Emergency telephone number

Emergency Phone : +91-8657457330

SECTION 2: Hazards identification

2.1 Classification

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

Flammable liquids	(Category 2)
Acute oral and inhalation toxicity – vapors	(Category 4)
Skin Corrosion/Irritation	(Category 1 B)
Serious Eye Damage/Eye Irritation	(Category 1)
Specific target organ toxicity (single exposure)	(Category 3)
Target Organs - Respiratory system.	

2.2 Label elements

Pictogram :



Signal word

Danger

Hazard statement (s)

Highly flammable liquid and vapor



Precautionary statement (s)

Causes severe skin burns and eye damage
Harmful if swallowed or inhaled
May cause respiratory irritation

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
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

Inhalation :
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

IF ON SKIN (or hair):
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

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



Hazards not otherwise classified (HNOC)

Disposal:
 Dispose of contents/container to an approved waste disposal plant
 Harmful to aquatic life with long lasting effects

SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	Weight %
Water	7732-18-5	55-74
Dimethylamine	124-40-3	26-45

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice:	If symptoms persist, call a physician.
If inhalation :	If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately.
In case of skin contact :	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion :	Clean mouth with water and drink afterwards plenty of water.
4.2 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
4.3 Notes to Physician :	Treat symptomatically

SECTION 5: Firefighting effects

5.1 Extinguishing media

Suitable extinguishing media	Dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media: :	No information available
5.2 Flash Point :	-18 °C / -0.4 °F
Method :	No information available



Autoignition Temperature:	390 °C / 734 °F
Explosion Limits:	
Upper	Upper : 12.3 vol %
Lower	Lower : 2.6 vol %
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 (NOx)

5.4 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.

NFPA:

Health	Flammability	Instability	Physical hazards
3	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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.

6.2 Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning 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.

SECTION 7: Handling and storage

7.1 Precautions for safe 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.



7.2 Conditions for safe storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Corrosives area. Incompatible Materials. Metals. Strong oxidizing agents. Acids. Halogens. Peroxides. Carbon dioxide (CO₂).

SECTION 8: Exposure controls/personal protection

8.1 Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Dimethylamine	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

Engineering Measures

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

8.2 Exposure controls

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 protection 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..

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Colorless Liquid
b) Odour	Ammonia-like, Fishy, strong
c) Odour Threshold	No information available
d) pH	12 (1%)
e) Melting point / freezing point	-37 °C / -34.6 °F
f) Initial boiling point and	54 °C / 129.2 °F



boiling range	
g) Flash point	-18 °C / -0.4 °F
h) Evaporation rate	No information available
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Upper : 12.3 vol % Lower : 2.6 vol %
k) Vapour pressure	287 mbar @ 25 °C
l) Vapour density	1.55
m) Specific Gravity	0.775 – 0.890
n) Solubility	Soluble in water
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	390 °C / 734 °F
q) Decomposition temperature	No information available
r) Viscosity	No information available

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	None known, based on information available
10.2 Chemical stability :	Stable under normal conditions.
10.3 Possibility of hazardous reactions :	None under normal processing.
10.4 Conditions to avoid :	Keep away from open flames, hot surfaces and sources of ignition. Excess heat.
10.5 Incompatible materials:	Metals, Strong oxidizing agents, Acids, Halogens, Peroxides, Carbon dioxide (CO ₂)
10.6 Hazardous decomposition products :	Nitrogen oxides (NO _x)
10.7 Hazardous Polymerization	Hazardous polymerization does not occur



SECTION 11: Toxicological information

11.1

Information on toxicological effects

Acute toxicity:

Product Information:

Oral LD50 Category 4. ATE = 300 - 2000 mg/kg.

Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50 Category 4. ATE = 10 - 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Dimethylamine	LD50 = 698 mg/kg (Rat)	LD50 = 3900 mg/kg (Rat)	LC50 = 7340 ppm (Rat) 20 min

Toxicologically Synergistic Products No information available

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
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Dimethyl amine	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)

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.



SECTION 12: Ecological information

12.1 Ecotoxicity:

The product contains following substances which are hazardous for the environment. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Dimethylamine	EC50: = 9 mg/L, 96h (Pseudokirchnerie lla 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)

12.2 Persistence and degradability: Persistence is unlikely based on information Available.

12.3 Mobility: Will likely be mobile in the environment due to its volatility.

SECTION 13: Disposal considerations

13.1 Waste treatment 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.

SECTION 14: Transport information

14.1 UN number :

DOT : UN1160 TDG : UN1160
IATA : UN1160 IMDG : UN1160

14.2 UN proper shipping name

DOT : DIMETHYLAMINE SOLUTION **TDG :** DIMETHYLAMINE SOLUTION
IMDG : DIMETHYLAMINE AQUEOUS SOLUTION **IATA :** DIMETHYLAMINE AQUEOUS SOLUTION

14.3 Transport hazard class(es) ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packaging group: ADR/RID: II IMDG: II IATA: II

SECTION 15: Regulatory information

15.1 United states of America Inventory:

Component	CAS No	TSCA	TSCA Inventory notification -Active-Inactive	TSCA - EPA Regulatory Flags
Water	7732-18-5	X	ACTIVE	-
Dimethyl amine	124-40-3	X	ACTIVE	-



Legend:

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 (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Water	7732-18-5	X	-	231-791-2	X	X		X	X	KE-35400
Dimethyl amine	124-40-3	X	-	204-697-4	X	X	X	X	X	KE-11124

U.S. Federal Regulations

SARA 313

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Dimethyl amine	124-40-3	26-45	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
Dimethyl amine	X	1000 lb	-	-

Clean Air Act

Not applicable

OSHA - Occupational Safety and Health Administration

Not applicable

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
Dimethylamine	1000 lb	-

California Proposition 65

This product does not contain any Proposition 65 chemicals.

chemicals.

15.2 U.S. State Right-to-Know Regulations:

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Dimethyl amine	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 - This product contains the following DHS Chemicals.
Security

Component	DHS Chemical Facility Anti-Terrorism Standard
Dimethylamine	Release STQs - 10000lb

Other International Regulations
Mexico – Grade Serious risk, Grade 3
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)
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Dimethylamine	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)
Water	7732-18-5	Not applicable	Not applicable	Not applicable	Not applicable
Dimethyl amine	124-40-3	Not applicable	Not applicable	Not applicable	Not applicable

SECTION 16: Other information

16.1 Prepared By: Regulatory affairs
 Krishna Solvechem
 Limited
Email: exports@kscl.co.in
Creation Date: 23-Mar-2012
Revision Date: 19-May-2023
Print Date: 19-May-2023
Revision Summary: This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C F R 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

16.2 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 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.

