

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date: 29.07.2020

Version No: 5.01

Revision: 29.07.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** Dimethylamine 40%

· **CAS Number:**

124-40-3

· **EC number:**

204-697-4

· **Index number:**

612-001-01-6

· **Registration number:** 01-2119475495-27-0003

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

· **Application of the substance / the preparation:**

Industrial use

Raw material for the chemical industry

Coating

Polymer preparations and compounds

Chemical intermediate

Use in laboratories. Industrial. Professional.

· **Uses advised against:** No further relevant information available.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Manufacturer:

Balchem Italia Srl

via Caduti di Via Fani 830

47032 Bertinoro (FC), Italy

Supplier:

Balchem Corporation

52 Sunrise Park Road

New Hampton

NY 10958, USA

Balchem Italia Srl

Via del Porto, snc

28040 Marano Ticino (NO), Italy

Tel.: 0039-(0)3219791

E-mail: sds@balchem.com

· **1.4 Emergency telephone number:**

CHEMTREC:

800-4249300 (USA)

+1 7035273887 (International)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 1 H224 Extremely flammable liquid and vapour.

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

STOT SE 3 H335 May cause respiratory irritation.

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Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02 GHS05 GHS07

· Signal word *Danger*

· Hazard-determining components of labelling:

methylamine (di-)

· Hazard statements

H224 *Extremely flammable liquid and vapour.*

H302+H332 *Harmful if swallowed or if inhaled.*

H314 *Causes severe skin burns and eye damage.*

H335 *May cause respiratory irritation.*

H412 *Harmful to aquatic life with long lasting effects.*

· Precautionary statements

P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

P241 *Use explosion-proof [electrical/ventilating/lighting] equipment.*

P260 *Do not breathe dusts or mists.*

P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

P310 *Immediately call a POISON CENTER/doctor.*

P405 *Store locked up.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** No

· **vPvB:** No

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances

· CAS No. Description

124-40-3 methylamine (di-) ... %

· Identification number(s)

· **EC number:** 204-697-4

· **Index number:** 612-001-01-6

· **Additional information:** Note B of Regulation (EC) 1272/2008 Annex VI applies.

· Description:

CAS: 7732-18-5

water (53 - 56 %)

60%

EC number: 231-791-2

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· Dangerous components:

CAS: 124-40-3	<i>methylamine (di-)</i>	40.0%
EC number: 204-697-4	<i>Flam. Gas 1, H220; Eye Dam. 1, H318; Acute Tox. 4, H332; Skin</i>	
Index number: 612-001-00-9	<i>Irrit. 2, H315; STOT SE 3, H335; Press. Gas (Comp.), H280;</i>	
Reg.nr.: 01-2119475495-27-0003	<i>Aquatic Chronic 3, H412</i>	

SECTION 4: First aid measures**· 4.1 Description of first aid measures****· General information:**

Take affected persons out of danger area and lay down.

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately rinse with water.

In cases of frost bites, rinse with plenty of water. Do not remove clothing.

Call a doctor immediately.

· After eye contact:

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

Call a doctor immediately.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do NOT induce vomiting.

Call for a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.**· 4.3 Indication of any immediate medical attention and special treatment needed**

Later observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures**· 5.1 Extinguishing media****· Suitable extinguishing agents:**

CO₂ powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

· For safety reasons unsuitable extinguishing agents: Water with full jet**· 5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide

Carbon dioxide

Nitrogen oxides (NO_x)

· 5.3 Advice for firefighters**· Protective equipment:** Wear self-contained respiratory protective device.**· Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective clothing.

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources.

· 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Dilute with plenty water.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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

Use neutralising agent.

Do not flush with water or aqueous cleansing agents

Dispose of the material collected according to regulations.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

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

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about fire and explosion protection:

Use explosion-proof apparatus / fittings and spark-proof tools.

Keep ignition sources away - Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Store in a cool location.

Store only in the original receptacle.

· Information about storage in one common storage facility: Store away from oxidising agents.

· Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

CAS: 124-40-3 methylamine (di-)

WEL (Great Britain) Short-term value: 11 mg/m³, 6 ppm

Long-term value: 3.8 mg/m³, 2 ppm

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IOELV (EU)	Short-term value: 9.4 mg/m ³ , 5 ppm Long-term value: 3.8 mg/m ³ , 2 ppm
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· DNELs**CAS: 124-40-3 methylamine (di-)**

Dermal	DNEL(long/systemic)	0.087 mg/kg bw/day (Workers (Industrial/Professional))
	DNEL(short/systemic)	1.95 mg/kg bw/day (Workers (Industrial/Professional))
Inhalative	DNEL(long/local)	12.9 mg/m ³ (Workers (Industrial/Professional))
	DNEL(long/systemic)	3.8 mg/m ³ (Workers (Industrial/Professional))
	DNEL(short/systemic)	9.4 mg/m ³ (Workers (Industrial/Professional))

· PNECs**CAS: 124-40-3 methylamine (di-)**

PNEC(aqua)	0.06 mg/L (freshwater)
	0.006 mg/L (marine water)
PNEC(STP)	100 mg/L (sewage treatment plant)
PNEC(sediment)	3.26 mg/kg sedi. dw (freshwater)
PNEC(soil)	0.038 mg/kg soil dw (soil)
PNEC(sediment)	0.33 g/kg sedi. dw (marine water)

· 8.2 Exposure controls**· Personal protective equipment:****· General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

The usual precautionary measures are to be adhered to when handling chemicals.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:

Protective gloves

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

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

· Material of gloves

Neoprene gloves

Nitrile rubber, NBR

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.

· 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 goggles

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· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid
Colour: Colourless

· Odour: Ammonia-like

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: -36 °C (@1013 hPa)

Initial boiling point and boiling range: 51 °C (@ 1013 hPa)

· Flash point: -19 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 402 °C (Dimethylamine 100%)

· Decomposition temperature: Not determined.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower: 2.8 Vol % (Dimethylamine 100%)

Upper: 14.4 Vol % (Dimethylamine 100%)

· Oxidising properties: No

· Vapour pressure at 20 °C: 260 hPa

· Density at 20 °C: 0.895 g/cm³

· Relative density: 1.55 air=1 (Dimethylamine 100%)

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water: Fully miscible.

· Partition coefficient: n-octanol/water:

124-40-3 | methylamine (di-) | -0,274 logPow @ 25 °C, pH 10,8 - 11,1 (OECD Guideline 107)

· Viscosity:

Dynamic at 20 °C: 1.7 mPas

Kinematic: Not determined.

· 9.2 Other information

Molecular formula: C₂H₇N (Dimethylamine 100%)

Molecular weight: 45.0837 (Dimethylamine 100%)

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability No decomposition if used and stored according to specifications.

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions

Forms explosive gas mixture with air.

Reacts with oxidising agents.

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- Reacts with various metals.
- Reacts with acids.
- **10.4 Conditions to avoid** Keep away from heat and direct sunlight.
- **10.5 Incompatible materials:**
 - Reacts with strong oxidising agents.
 - Corrosive action on metals.
 - Corrodes aluminium.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful if swallowed or if inhaled.

· LD/LC50 values relevant for classification:

CAS: 124-40-3 methylamine (di-)

Oral	LD50	~ 1000 mg/kg (Rat) aqueous solution
Dermal	LD50	3900 mg/kg (Rat)
Inhalative	LC50 (1h)	9.9 mg/L (Rat) (inhalation:gas)

· Primary irritant effect:

· Skin corrosion/irritation

Causes severe skin burns and eye damage.

· Serious eye damage/irritation

Causes severe skin burns and eye damage.

· Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· Germ cell mutagenicity

Based on available data, the classification criteria are not met.

· Carcinogenicity

Based on available data, the classification criteria are not met.

· Reproductive toxicity

Based on available data, the classification criteria are not met.

· STOT-single exposure

May cause respiratory irritation.

· STOT-repeated exposure

Based on available data, the classification criteria are not met.

· Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 124-40-3 methylamine (di-)

LC50 (96h)	118 mg/L (Fish) (ISRA (Rome, 1973))
EC10 (0,5h) (static)	> 1000 mg/L (Bacteria) (ISO 8192, activated sludge)
EC50 (96h) (static)	9 mg/L (Algae) (EPA (1971), Pseudokirchneriella subcapitata)
EC50 (48h) (static)	88.67 mg/L (Daphnia) (EU Method C.2, Daphnia magna)
NOEC (30d)	10 mg/L (Daphnia) (Daphnia magna) semi-static
NOEC	0.6 mg/L (Fish) (50 d, juvenile fish: growth) flow-through
NOEC (96h) (static)	2 mg/L (Algae) (EPA (1971), Pseudokirchneriella subcapitata)

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· 12.2 Persistence and degradability

124-40-3 methylamine (di-) 88 % (4wk, OECD Guideline 301C)

· 12.3 Bioaccumulative potential

124-40-3 methylamine (di-) 3,16 L/kg BCF (QSAR)

· 12.4 Mobility in soil No further relevant information available.

· 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation: Must be specially treated adhering to official regulations.

· Uncleaned packaging

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR/RID/ADN, IMDG, IATA UN1160

· 14.2 UN proper shipping name

· ADR/RID/ADN 1160 DIMETHYLAMINE, AQUEOUS SOLUTION

· IMDG, IATA DIMETHYLAMINE, AQUEOUS SOLUTION

· 14.3 Transport hazard class(es)

· ADR/RID/ADN



· Class 3 Flammable liquids.

· Label 3+8

· IMDG



· Class 3 Flammable liquids.

· Label 3/8

· IATA



· Class 3+8

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· Label	3
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Flammable liquids. 338 F-E,S-C Alkalis B SG35 Stow "separated from" SGG1-acids
· 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN · Tunnel restriction code	D/E
· UN "Model Regulation":	UN 1160 DIMETHYLAMINE, AQUEOUS SOLUTION, 3 (8), II

SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category P5a FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 10 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H412 Harmful to aquatic life with long lasting effects.

· **Department issuing SDS:**

Balchem Corporation
52 Sunrise Park Road
New Hampton, NY 10958

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Abbreviations and acronyms:

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

UN: United Nations (also UNO: United Nations Organization)

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

ASTM: American Society for Testing and Materials

WAF: Water Accommodated Fraction

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 Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1: Flammable gases – Category 1

Press. Gas (Comp.): Gases under pressure – Compressed gas

Flam. Liq. 1: Flammable liquids – Category 1

Acute Tox. 4: Acute toxicity - inhalation – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

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