

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

Revision: 20.06.2013

Printing date 02.07.2013

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name

Methylamine, 40% w/w aqueous solution

Stock number:

L00894

1.2 Relevant identified uses of the substance

or mixture and uses advised against.

Identified use:

No further relevant information available.
SU24 Scientific research and development**1.3 Details of the supplier of the safety data sheet**

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz


www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

 GHS02 flame

Flam. Liq. 2, H225 Highly flammable liquid and vapour.


 GHS05 corrosion

Eye Dam. 1, H318 Causes serious eye damage.


 GHS07

Skin Irrit. 2, H315 Causes skin irritation.

STOT SE 3, H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC C; Corrosive

R34: Causes burns.

 Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.

 F+; Extremely flammable

R12: Extremely flammable.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Other hazards that do not result in classification

No information known.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard pictograms

Signal word

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

GHS02, GHS05, GHS07

Danger

Hazard-determining components of labelling:

Hazard statements

Methylamine
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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.
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:








Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Dangerous components:**CAS: 74-89-5
EINECS: 200-820-0

Methylamine

 Xn R20;  Xi R37/38-41;  F+ R12 Flam. Gas 1, H220;  Press. Gas, H280;  Eye Dam. 1, H318;  Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335

40,0%

Additional information

None known.

Non-Hazardous IngredientsCAS: 7732-18-5
EINECS: 231-791-2

Water

60,0%

SECTION 4: First aid measures**4.1 Description of first aid measures**

General information

After inhalation

Instantly remove any clothing soiled by the product.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Seek immediate medical advice.

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After skin contact	Instantly wash with water and soap and rinse thoroughly.
After eye contact	Seek immediate medical advice.
After swallowing	Rinse opened eye for several minutes under running water. Then consult doctor.
4.2 Most important symptoms and effects, both acute and delayed	Seek medical treatment.
4.3 Indication of any immediate medical attention and special treatment needed	No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media	CO ₂ , extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Suitable extinguishing agents	
5.2 Special hazards arising from the substance or mixture	If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Nitrogen oxides (NO _x)
5.3 Advice for firefighters	
Protective equipment:	Wear self-contained breathing apparatus. Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
6.2 Environmental precautions:	Keep away from ignition sources Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.
6.3 Methods and material for containment and cleaning up:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation. Keep away from ignition sources.
Prevention of secondary hazards:	See Section 7 for information on safe handling
6.4 Reference to other sections	See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Keep away from heat and direct sunlight. Ensure good ventilation/exhaustion at the workplace. Open and handle container with care.
Information about protection against explosions and fires:	Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.
7.2 Conditions for safe storage, including any incompatibilities	
Storage	
Requirements to be met by storerooms and containers:	Store in cool location.
Information about storage in one common storage facility:	Do not store together with acids. Store away from oxidizing agents. Store away from acid chlorides. Store away from acid anhydrides. Water reacts with many metals to give hydrogen, often violently. Water also reacts violently with many reactive organic and inorganic chemicals.
Further information about storage conditions:	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from heat and direct sunlight. Store in a locked cabinet or with access restricted to technical experts or their assistants.
7.3 Specific end use(s)	No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
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8.1 Control parameters
Components with critical values that require monitoring at the workplace:
74-89-5 Methylamine (40,0%)

AGW (Germany)	13 mg/m ³ , 10 ppm =1=(!);DFG
PEL (USA)	12 mg/m ³ , 10 ppm
REL (USA)	12 mg/m ³ , 10 ppm
TLV (USA)	Short-term value: 19 mg/m ³ , 15 ppm Long-term value: 6,4 mg/m ³ , 5 ppm

Additional information: No data

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Use breathing protection with high concentrations.

Breathing equipment:
Recommended filter device for short term use: Use a respirator with organic vapor/acid gas cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).
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Protection of hands:	Check protective gloves prior to each use for their proper condition. 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.
Material of gloves	Nitrile rubber, NBR
Penetration time of glove material	Not determined
Eye protection:	Tightly sealed safety glasses. Full face protection
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
Smell:	Ammonia-like
Odour threshold:	Not determined.

pH-value at 20 °C: 11,2

Change in condition

Melting point/Melting range:	-38 °C
Boiling point/Boiling range:	49 °C
Sublimation temperature / start:	Not determined

Flash point:	-14 °C
Inflammability (solid, gaseous)	Not determined.
Ignition temperature:	430 °C
Decomposition temperature:	Not determined
Self-inflammability:	Product is not selfigniting.

Critical values for explosion:

Lower:	5,0 Vol %
Upper:	20,7 Vol %

Steam pressure at 20 °C:	3000 hPa
Density at 20 °C	0,899 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.

Solvent content:

Organic solvents:	0,0 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity
10.1 Reactivity

No information known.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents
Water reacts violently with alkali metals.

10.5 Incompatible materials:

Acids
Oxidizing agents
Acid chlorides
Acid anhydrides
Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.

10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)

SECTION 11: Toxicological information
11.1 Information on toxicological effects
Acute toxicity:

Harmful if inhaled.
Harmful if swallowed.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:
74-89-5 Methylamine

Oral	LD50	100 mg/kg (rat)
Inhalative	LC50/2H	2400 mg/m ³ /2H (mouse)

Skin irritation or corrosion:

Causes severe skin burns.

Eye irritation or corrosion:

Causes serious eye damage.

Sensitization:

No sensitizing effect known.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity -
repeated exposure:

No effects known.

Specific target organ system toxicity - single
exposure:

No effects known.

Aspiration hazard:

No effects known.

Experience with humans:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful

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Corrosive

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SECTION 12: Ecological information

12.1 Toxicity	No further relevant information available.
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
Additional ecological information:	
General notes:	Do not allow product to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits. Water hazard class 2 (Self-assessment): hazardous for water. Danger to drinking water if even small quantities leak into soil. Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	Hand over to disposers of hazardous waste.
Recommendation	Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.
Recommended cleaning agent:	Water, if necessary with cleaning agent.

SECTION 14: Transport information

UN-Number ADR, IMDG, IATA	UN1235
14.2 UN proper shipping name ADR IMDG, IATA	1235 METHYLAMINE, AQUEOUS SOLUTION METHYLAMINE, AQUEOUS SOLUTION
14.3 Transport hazard class(es) ADR	
	
	
Class Label IMDG, IATA	3 (FC) Flammable liquids. 3+8
	
	
Class Label	3 Flammable liquids. 3+8
Packing group ADR, IMDG, IATA	II
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user Kemler Number: EMS Number: Segregation groups	Warning: Flammable liquids. 338 F-E,S-C Alkalis
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Excepted quantities (EQ):	E2
Limited quantities (LQ)	1L
Transport category	2
Tunnel restriction code	D/E
UN "Model Regulation":	UN1235, METHYLAMINE, AQUEOUS SOLUTION, 3 (8), II

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical Substances**

All ingredients are listed.

Standard for the Uniform Scheduling of Drugs and Poisons

None of the ingredients is listed.

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Classification according to VbF:**Technical instructions (air):**

Class	Share in %
Wasser	60,0
NK	40,0

Water hazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive regulations**ELINCS (European List of Notified Chemical Substances)**

None of the ingredients is listed.

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Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

REACH - Pre-registered substances

All ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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.
R12 Extremely flammable.
R20 Harmful by inhalation.
R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.

Department issuing data specification sheet:**Abbreviations and acronyms:**

Health, Safety and Environmental Department.
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
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

DE/E