

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

Trade name

(Trimethylsilyl)diazomethane, 2M in hexanes

Stock number:

H26744

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

Identified use:

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.



GHS06 skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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



T; Toxic

R23: Toxic by inhalation.



Xn; Harmful

R48/20-62-65: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed.



Xi; Irritant

R36/38: Irritating to eyes and skin.



F; Highly flammable

R11: Highly flammable.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

Preliminary information in humans suggests that trimethylsilyldiazomethane may be highly toxic, or fatal if inhaled. Symptoms may include respiratory tract inflammation and lung effects such as edema. these effects may be delayed for hours or days after first exposure.
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, GHS06, GHS08, GHS09

Danger

Hazard-determining components of labelling:

(Trimethylsilyl)diazomethane
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Hazard statements

H225 Highly flammable liquid and vapour.
H330 Fatal if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P320 Specific treatment is urgent (see on this label).

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

Revision: 10.01.2012

Printing date 01.07.2013

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	P405 P501	Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.	(Contd. of page 1)
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:

18107-18-1 (Trimethylsilyl)diazomethane	T R23; Xi R36 Acute Tox. 2, H330; Eye Irrit. 2, H319	35,0%
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Additional information None known.

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

General information	Move out of the dangerous area and consult a physician. Show the attending physician a copy of the MSDS. Instantly remove any clothing soiled by the product. Remove breathing apparatus only after soiled clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration. Symptoms may be delayed for hours or days after exposure. Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
After inhalation	Seek immediate medical advice. Instantly wash with water and soap and rinse thoroughly.
After skin contact	Seek immediate medical advice. Rinse opened eye for several minutes under running water. Then consult doctor.
After eye contact	Do not induce vomiting.
After swallowing	
4.2 Most important symptoms and effects, both acute and delayed	Serious delayed effects may occur after inhalation exposure.
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) Silicon oxide
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. Keep away from ignition sources.
6.2 Environmental precautions:	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:	Keep away from ignition sources. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.
Prevention of secondary hazards:	Keep away from ignition sources.
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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Avoid inhalation of this product. Only use this product in a closed system or with adequate ventilation. Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. 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:	Store away from oxidizing agents. Do not store together with acids. Store away from strong bases.
Further information about storage conditions:	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. 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:

Hexane isomers, other than n-hexane	
	ppm
ACGIH TLV	500; 1000-STEL
Belgium TWA	500; 1000-STEL
Denmark TWA	300
Finland TWA	500; 625-STEL
France TWA	500
Germany TWA	200
Ireland TWA	500; 1000-STEL
Sweden TWA	200; 300-STEL
Switzerland TWA	500

n-Hexane

	ppm
ACGIH TLV	50 (skin)
Austria MAK	50
Belgium TWA	50
Denmark TWA	25
Finland TWA	50; 150-STEL
France VME	50
Germany MAK	50
Hungary TWA	100; 200-STEL
Japan OEL	40 (skin)
Korea TLV	50 (skin)
Netherlands MAC-TGG	25
Norway TWA	25
Poland TWA	100; 400-STEL
Russia TWA	40; 300-STEL
Sweden NGV	25; 50-KTV
Switzerland MAK-W	50; 100-KZG-W
United Kingdom TWA	20
USA PEL	500
No data	

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

Avoid inhalation of this product. Only use this product in a closed system or with adequate ventilation.

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.

Store protective clothing separately.

Do not inhale dust / smoke / mist.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

When identified through risk assessment that air purifying respirators are appropriate use a full face respirator with a multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. When a respirator is the only means of protection, use a full face supplied air respirator. Use all respiratory protective equipment and components in accordance with manufacturer's guidelines and appropriate government standards such as NIOSH (US) or CEN (EU).

Use self-contained respiratory protective device in emergency situations.

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

Impervious gloves

Penetration time of glove material

Not determined

Eye protection:

Safety glasses

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:	Yellow
Smell:	Not determined
Odour threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:	-23 °C
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	280 °C
Decomposition temperature:	Not determined
Self-inflammability:	Product is not selfigniting.
Critical values for explosion:	
Lower:	1,2 Vol %
Upper:	8,3 Vol %
Steam pressure at 20 °C:	160 hPa
Density at 20 °C	0,718 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.

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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 (Trimethylsilyl)diazomethane in alcoholic solvents under acidic or basic conditions can lead to the formation of diazomethane.
10.5 Incompatible materials: Acids
Oxidizing agents
Bases
10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Silicon oxide
Diazomethane

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity: Fatal if inhaled.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: Causes skin irritation.
Eye irritation or corrosion: Causes serious eye irritation.
Sensitization: No data available.
Germ cell mutagenicity: No effects known.
Carcinogenicity: EPA-I: Data are inadequate for an assessment of human carcinogenic potential.
Reproductive toxicity: Suspected of damaging fertility or the unborn child.
Specific target organ system toxicity - repeated exposure: May cause damage to organs through prolonged or repeated exposure.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: May be fatal if swallowed and enters airways.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. (Trimethylsilyl)diazomethane is under review by the National Toxicology Program (NTP). Preliminary information in humans suggests that trimethylsilyldiazomethane may be highly toxic, or fatal if inhaled. Symptoms may include respiratory tract inflammation and lung effects such as edema. these effects may be delayed for hours or days after first exposure. 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:
Toxic
Irritant

SECTION 12: Ecological information

12.1 Toxicity
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.
Ecotoxicological effects:
Remark: Toxic for fish
Additional ecological information:
General notes: Do not allow material to be released to the environment without proper governmental permits.
Toxic for aquatic organisms
Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.
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
Recommendation Hand over to disposers of hazardous waste.
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.

SECTION 14: Transport information

UN-Number
ADR, IMDG, IATA UN1992
14.2 UN proper shipping name
ADR 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. ((Trimethylsilyl)diazomethane)
IMDG FLAMMABLE LIQUID, TOXIC, N.O.S. ((Trimethylsilyl)diazomethane), MARINE POLLUTANT
IATA FLAMMABLE LIQUID, TOXIC, N.O.S. ((Trimethylsilyl)diazomethane)
14.3 Transport hazard class(es)
ADR

Class 3 (FT1) Flammable liquids.

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Printing date 01.07.2013

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Label	3+6.1
IMDG	
	
Class	3 Flammable liquids.
Label IATA	3+6.1
	
Class Label	3 Flammable liquids. 3+6.1
Packing group ADR, IMDG, IATA	I
14.5 Environmental hazards:	
Marine pollutant:	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Flammable liquids.
Kemler Number:	336
EMS Number:	F-E,S-D
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):	E0
Limited quantities (LQ)	0
Transport category	1
Tunnel restriction code	C/E
UN "Model Regulation":	UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. ((Trimethylsilyl)diazomethane), 3 (6.1), I

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

None of the ingredients is listed.

Standard for the Uniform Scheduling of Drugs and Poisons

None of the ingredients is listed.

National regulations**Information about limitation of use:**

For use only by technically qualified individuals.
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning women of child-bearing age must be observed.

Classification according to VbF:

A I

Water hazard class:

Water danger class 3 (Self-assessment): extremely hazardous for water.

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

None of the ingredients is listed.

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

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

R23 Toxic by inhalation.

R36 Irritating to eyes.

Department issuing data specification sheet:

Health, Safety and Environmental Department.

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)

ICAO: International Civil Aviation Organization

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