

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.07.2013

Revision: 13.12.2012

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

Trade name

Diethylene glycol dimethyl ether

Stock number:

AI3397

CAS Number:

111-96-6

EC number:

203-924-4

Index number:

603-139-00-0

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. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Repr. 1B H360FD May damage fertility. May damage the unborn child.

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



T; Toxic

Repr. Cat. 2

R60-61: May impair fertility. May cause harm to the unborn child.

R10-19: Flammable. May form explosive peroxides.

Information concerning particular hazards

for human and environment:

Not applicable

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

Hazard statements

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

GHS02, GHS08

Danger

H226 Flammable liquid and vapour.

H360FD May damage fertility. May damage the unborn child.

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241

Use explosion-proof electrical/ventilating/lighting/equipment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin

with water/shower.

P405

Store locked up.

P501

Dispose of contents/container in accordance with local/regional/national/international

regulations.

Additional information:

EUH019 May form explosive peroxides.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation:

111-96-6 Diethylene glycol dimethyl ether

Identification number(s):

203-924-4

EC number:

603-139-00-0

Index number:

603-139-00-0

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

After inhalation

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

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

Rinse opened eye for several minutes under running water. Then consult doctor.

Seek medical treatment.

After skin contact

After eye contact

After swallowing

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

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing agents

CO2, sand, extinguishing powder. Do not use water.

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

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

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Wear full protective suit.

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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

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.

6.2 Environmental precautions:**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.

Keep away from ignition sources.

Prevention of secondary hazards:**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**

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.

Do not distill to dryness.

Explosive peroxides may form, handle container cautiously.

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.

Store away from water.

Further information about storage conditions:

This product is hygroscopic.

Store under dry inert gas.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and keep away from water.

Avoid contact with air / oxygen (formation of peroxide).

Store in a locked cabinet or with access restricted to technical experts or their assistants.

Check container pressure periodically to prevent explosive peroxides.

No further relevant information available.

7.3 Specific end use(s)**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.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:****111-96-6 Diethylene glycol dimethyl ether (100,0%)**AGW (Germany) 28 mg/m³, 5 ppm
8(II);DFG, H, Z**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.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

Use breathing protection with high concentrations.

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.

Breathing equipment:**Protection of hands:****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:

Not determined.

Smell:

Not determined

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition**Melting point/Melting range:**

-64 °C

Boiling point/Boiling range:

161-162 °C

Sublimation temperature / start:

Not determined

Flash point:

51 °C

Inflammability (solid, gaseous)

Not applicable.

Ignition temperature:

190 °C

Decomposition temperature:

Not determined

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Self-inflammability:	Not determined.
Danger of explosion:	May form explosive peroxides. Do not distill to dryness.
Critical values for explosion:	
Lower:	1,4 Vol %
Upper:	Not determined
Steam pressure at 20 °C:	2,7 hPa
Density at 20 °C	0,944 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 at 20 °C:	1,88 mPas
kinematic:	Not determined.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity	May form explosive peroxides.
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	Forms peroxides
10.5 Incompatible materials:	Oxidizing agents Water/moisture
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	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:

Oral LD50 5400 mg/kg (rat)

Skin irritation or corrosion:	May cause irritation
Eye irritation or corrosion:	May cause irritation
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:	May damage fertility or the unborn child. The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.
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.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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.
Additional ecological information:	
General notes:	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Assessment by list): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. 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.
Recommended cleaning agent:	Water, if necessary with cleaning agent.

SECTION 14: Transport information

UN-Number	
ADR, IMDG, IATA	UN3271
14.2 UN proper shipping name	
ADR	3271 ETHERS, N.O.S. (Diethylene glycol dimethyl ether)
IMDG, IATA	ETHERS, N.O.S. (Diethylene glycol dimethyl ether)
14.3 Transport hazard class(es)	
ADR	
	
Class	3 (F1) Flammable liquids.

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Label
IMDG, IATA

3

Class
Label3 Flammable liquids.
3Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user
Kemler Number:Warning: Flammable liquids.
3014.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code

Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ):
Limited quantities (LQ)
Transport category
Tunnel restriction codeE1
5L
3
D/E

UN "Model Regulation":

UN3271, ETHERS, N.O.S. (Diethylene glycol dimethyl ether), 3, III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**Australian Inventory of Chemical
Substances
Standard for the Uniform Scheduling of
Drugs and Poisons
National regulations
Information about limitation of use:

Substance is listed.

Substance is not listed.

Employment restrictions concerning young persons must be observed.
Employment restrictions concerning women of child-bearing age must be observed.
For use only by technically qualified individuals.Classification according to VbF:
Technical instructions (air):

Not applicable

Class	Share in %
NK	100,0

Water hazard class:

Water hazard class 1 (Assessment by list): slightly hazardous for water.

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

Substance is not listed.

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

This product contains a product listed by the European Chemicals Agency (ECHA) as a Substance of Very High Concern (SVHC). Information concerning SVHC can be found in Annex XIV for the REACH Regulation.

REACH - Pre-registered substances
15.2 Chemical safety assessment:Substance is listed.
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.

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
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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