

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

1.1 Product identifier
Trade name **Ethylene glycol-d(6)**
Stock number: 42288
CAS Number: 15054-86-1
EC number: 239-122-6

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
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 The substance is not classified as hazardous to health or the environment according to the CLP regulation.

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

Xn; Harmful

R22: Harmful if swallowed.

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 Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable

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: 15054-86-1 Ethylene glycol-d(6)
Identification number(s):
EC number: 239-122-6

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.
After skin contact Seek immediate medical advice.
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
Suitable extinguishing agents CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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.
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:
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).
Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections
Prevention of secondary hazards: No special measures required.
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.

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Information about protection against explosions and fires:

No information known.

7.2 Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and containers:**

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
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:**

Ethylene glycol
ppm

Australia TWA	24
ACGIH TLV	100
Austria MAK	10 (skin)
Belgium	50-STEEL
Denmark TWA	50
Finland TWA	10 mg/m ³ ; 20 mg/m ³ -STEEL
France VLE	50
Germany MAK	10 (skin)
Hungary	50 mg/m ³ -STEEL (skin)
Korea TLV	100
Netherlands MAC-TGG	50
Norway TWA	25
Polnd TWA	15 mg/m ³ ; 50 mg/m ³ -STEEL
Russia	5 mg/m ³ -STEEL
Sweden NGV	10; 20-KTV (skin)
Switzerland MAK-W	50
United Kingdom TWA	60 mg/m ³ ; 125 mg/m ³ -STEEL (vapor)

No data

Additional information:**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.
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:**

Impervious gloves
Not determined
Safety glasses
Protective work clothing.

Material of gloves**Penetration time of glove material****Eye protection:****Body protection:****SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form: Liquid
Colour: Colourless
Smell: Odourless
Odour threshold: Not determined.

pH-value: Not determined.**Change in condition**

Melting point/Melting range: -13 °C
Boiling point/Boiling range: 86-87 °C ((8mm Hg))
Sublimation temperature / start: Not determined

Flash point: 111 °C
Inflammability (solid, gaseous): Not determined.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Self-inflammability: Not determined.

Danger of explosion:

Product is not explosive.

Critical values for explosion:

Lower: 3,2 Vol %
Upper: 15,3 Vol %
Steam pressure at 20 °C: 0,1064 hPa
Density at 20 °C: 1,189 g/cm³
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.

9.2 Other information No further relevant information available.**SECTION 10: Stability and reactivity****10.1 Reactivity**

No information known.

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

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Trade name **Ethylene glycol-d(6)**

10.2 Chemical stability	Stable under recommended storage conditions.	(Contd. of page 2)
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.	
10.3 Possibility of hazardous reactions	No dangerous reactions known	
10.5 Incompatible materials:	Oxidizing agents Bases	
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide	

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:** Harmful if swallowed.**LD/LC50 values that are relevant for classification:**

Oral	LD50	6610 mg/kg (guinea pig) 5500 mg/kg (mouse) 4700 mg/kg (rat)
Dermal	LD50	9530 mg/kg (rabbit)

Skin irritation or corrosion:	Irritant for skin and mucous membranes.
Eye irritation or corrosion:	Irritant effect.
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	No effects known.
Carcinogenicity:	ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
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.
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	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:	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): 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	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	None
ADR, IMDG, IATA	None
14.2 UN proper shipping name	None
ADR, IMDG, IATA	None
14.3 Transport hazard class(es)	None
ADR, IMDG, IATA	None
Class	None
Packing group	None
ADR, IMDG, IATA	None
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.

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

Australian Inventory of Chemical Substances	Substance is not listed.
Standard for the Uniform Scheduling of Drugs and Poisons	Substance is not listed.
National regulations	
Information about limitation of use:	For use only by technically qualified individuals. Employment restrictions concerning young persons must be observed.
Water hazard class:	Water hazard class 1 (Self-assessment): slightly hazardous for water.
Other regulations, limitations and prohibitive regulations	
ELINCS (European List of Notified Chemical Substances)	Substance is not listed.
Substances of very high concern (SVHC) according to REACH, Article 57	Substance is not listed.

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Trade name **Ethylene glycol-d(6)****REACH - Pre-registered substances**
15.2 Chemical safety assessment:Substance is listed.
A Chemical Safety Assessment has not been carried out.

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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:**

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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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