

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 07.05.2010

Printing date 01.07.2013

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

Trade name

Silicon(IV) 2-ethylhexanoate, nominally 75% in ethanol

Stock number:

44635

CAS Number:

67939-81-5

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.



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

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

Xn; Harmful

R63 Possible risk of harm to the unborn child.



F; Highly flammable

R11 Highly flammable.

Information concerning particular hazards for human and environment:**Other hazards that do not result in classification**

Not applicable

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

H225 Highly flammable liquid and vapour.

H361d Suspected of damaging the unborn child.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves / protective clothing.

Precautionary statements

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:

67939-81-5 Silicon(IV) 2-ethylhexanoate, nominally 75% in ethanol

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

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

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:(Contd. on page 2)
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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.
Keep away from ignition sources.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

Prevention of secondary hazards:**6.4 Reference to other sections****SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

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:
Information about storage in one common storage facility:

Store in cool location.

Further information about storage conditions:

Store away from oxidizing agents.
Store away from water.

Store under dry inert gas.
This product is moisture sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
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:**

Ethyl alcohol

ppm

ACGIH TLV 1000-STEL; Confirmed animal carcinogen with unknown relevance to humans.

Austria MAK 1000

Belgium TWA 1000

Denmark TWA 1000

Finland TWA 1000; 1250-STEL

France VME 1000; 5000-VLE

Germany MAK 1000

Hungary TWA 1000; 3000-STEL

Korea TLV 1000; Not classifiable as a human carcinogen

Netherlands MAC-TGG 500

Norway TWA 500

Poland TWA 1000 mg/m³; 300 mg/m³-STEL

Russia 1000 mg/m³-STEL

Sweden NGV 500; 1000-KTV

Switzerland MAK-W 1000

United Kingdom TWA 1000

OSHA PEL 1000

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:****Material of gloves****Penetration time of glove material****Eye protection:**

Impervious gloves

Not determined

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: Alcohol-like

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: Not determined

Inflammability (solid, gaseous): Not determined.

Ignition temperature: Not determined

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Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not determined
Density	Not determined
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Hydrolyzes
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.
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	No dangerous reactions known
10.5 Incompatible materials:	Oxidizing agents Water/moisture
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide Silicon oxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	No effects known.
LD/LC50 values that are relevant for classification:	Ethanol (CAS# 64-17-5) ORL-RAT LD50: 7060 MG/KG ORL-MUS LD50: 3450 MG/KG IHL-RAT LC50: 20000 PPM/10H
Skin irritation or corrosion:	May cause irritation
Eye irritation or corrosion:	May cause irritation
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. Suspected of damaging fertility or the unborn child.
Reproductive toxicity:	
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 (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	
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	UN1170
ADR, IMDG, IATA	
14.2 UN proper shipping name	
ADR	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IATA	ETHANOL SOLUTION
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

II

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Warning: Flammable liquids.

Kemler Number:

33

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):

E2

Limited quantities (LQ)

1L

Transport category

2

Tunnel restriction code

D/E

UN "Model Regulation":

UN1170, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

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:

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

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.

REACH - Pre-registered substances

Substance is 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.

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)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 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
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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