

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.07.2011

Revision: 30.06.2011

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

Product identifier

Trade name

Dimethyl selenide

Stock number:

68116

CAS Number:

593-79-3

EINECS Number:

209-807-4

Index number:

034-002-00-8

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

Sector of Use

SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Benzstrasse 3
D-76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department:

Emergency telephone number:

Product safety department.
Product Safety Department +049 (0) 7275 988687-0 (business hours)
Carechem 24: +44 (0) 1235 239 670 (Multi-language 24 hour emergency)
Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240

2 Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 health hazard

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



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

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



T; Toxic

R23/25: Toxic by inhalation and if swallowed.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R33: Danger of cumulative effects.

Information concerning particular hazards for human and environment:

Not applicable

Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

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



GHS06 GHS08 GHS09

Signal word

Hazard statements

Danger

H301 Toxic if swallowed.

H330 Fatal if inhaled.

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

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P284 Wear respiratory protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P320 Specific treatment is urgent (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

(CAS#) Designation:

593-79-3 Dimethyl selenide

Identification number(s):

EINECS Number:

209-807-4

Index number:

034-002-00-8

4 First aid measures

Description of first aid measures

General information

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.

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.

Do not induce vomiting; instantly call for medical help.

Seek immediate medical advice.

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Information for doctor
Most important symptoms and effects, both acute and delayed
Indication of any immediate medical attention and special treatment needed

No further relevant information available.

No further relevant information available.

5 Firefighting measures

Extinguishing media
Suitable extinguishing agents
Special hazards arising from the substance or mixture

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Can be released in case of fire:
 Carbon monoxide and carbon dioxide
 Selenium dioxide (SeO₂)

Advice for firefighters
Protective equipment:

Wear self-contained breathing apparatus.
 Wear full protective suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Do not allow material to be released to the environment without proper governmental permits.

Environmental precautions:
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.
 Ensure adequate ventilation.
 See Section 7 for information on safe handling
 See section 8 for information on personal protection equipment.
 See Section 13 for information on disposal.

Reference to other sections

7 Handling and storage

Handling
Precautions for safe handling

Handle under dry protective gas.
 Keep containers tightly sealed.
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle container with care.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:

Refrigerate

Store away from air.
 Store in the dark.
 Protect from heat.
 Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.
 Keep container tightly sealed.
 Protect from the effects of light.
 Store in a locked cabinet or with access restricted to technical experts or their assistants.
 Refrigerate
 This product is air sensitive.
 No further relevant information available.

Specific end use(s)

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.

Control parameters
Components with critical values that require monitoring at the workplace:
Additional information:

Not required.

No data

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.

Breathing equipment:
Protection of hands:
Material of gloves

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.
 Impervious gloves
 Not determined
 Safety glasses
 Protective work clothing.

Penetration time of glove material
Eye protection:
Body protection:

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information

Appearance:

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

pH-value: Not determined.

Change in condition
Melting point/Melting range: Not determined

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Boiling point/Boiling range:	56-58°C
Sublimation temperature / start:	Not determined
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Danger of explosion:	Product is not explosive.
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not determined
Density at 20°C	1.41 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Segregation coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity	
Chemical stability	
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Possibility of hazardous reactions	No dangerous reactions known
Incompatible materials:	Air Heat Light Oxidizing agents Carbon monoxide and carbon dioxide Selenium dioxide (SeO ₂)
Hazardous decomposition products:	

11 Toxicological information

Information on toxicological effects	
Acute toxicity:	
Primary irritant effect:	
on the skin:	May cause irritation
on the eye:	May cause irritation
Sensitization:	No sensitizing effect known.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and/or other multiple dose toxicity data for components in this product. EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available. IARC-3: Not classifiable as to carcinogenicity to humans.

12 Ecological information

Toxicity	
Aquatic toxicity:	No further relevant information available.
Persistence and degradability	No further relevant information available.
Behaviour in environmental systems:	
Bioaccumulative potential	No further relevant information available.
Mobility in soil	No further relevant information available.
Ecotoxicological effects:	
Remark:	Very toxic for fish
Additional ecological information:	
General notes:	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. Do not allow material to be released to the environment without proper governmental permits. Very toxic for aquatic organisms
Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
Other adverse effects	No further relevant information available.

13 Disposal considerations

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.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



ADR/RID-GGVS/E Class:	6.1 (T3) Toxic substances.
Kemler Number:	60
UN-Number:	3282
Packaging group:	III

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Label 6.1
Special marking: Symbol (fish and tree)
UN proper shipping name: 3282 ORGANOMETALLIC COMPOUND, TOXIC, LIQUID, N.O.S. (Dimethyl selenide)
Limited quantities (LQ) LQ7
Transport category 2
Tunnel restriction code E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 6.1
UN Number: 3282
Label 6.1
Packaging group: III
EMS Number: F-A, S-A
Marine pollutant: No
Correct technical name: ORGANOMETALLIC COMPOUND, TOXIC, LIQUID, N.O.S. (Dimethyl selenide)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 6.1
UN/ID Number: 3282
Label 6.1
Packaging group: III
Correct technical name: ORGANOMETALLIC COMPOUND, TOXIC, LIQUID, N.O.S. (Dimethyl selenide)

UN "Model Regulation":

Environmental hazards: UN3282, ORGANOMETALLIC COMPOUND, TOXIC, LIQUID, N.O.S., 6.1, III
Special precautions for user Environmentally hazardous substance, liquid; Marine Pollutant
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Warning: Toxic substances.
 Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

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



GHS06 GHS08 GHS09

Signal word

Danger

Hazard statements

H301 Toxic if swallowed.
 H330 Fatal if inhaled.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P284 Wear respiratory protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P320 Specific treatment is urgent (see on this label).
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations

Information about limitation of use:

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

Technical instructions (air):

Class	Share in %
I	100.0

Water hazard class:

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

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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.

Contact:

Zachariah C. Holt

Global EHS Manager

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)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 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)
 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)