

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 29.07.2010

Revision: 29.07.2010

1 Identification of substance

Product details

Trade name

Selenourea

Stock number:

B21440

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240

2 Hazards identification

Hazard designation:

T Toxic
N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 23/25 Toxic by inhalation and if swallowed.
R 33 Danger of cumulative effects.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Danger**H301 - Toxic if swallowed.
H331 - Toxic if inhaled.**Warning**

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

**Warning**H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Prevention:

Response:

Storage:

Disposal:

3 Composition/information on ingredients

Chemical characterization:

Selenourea (CAS# 630-10-4): 100%

Designation: (CAS#)

Identification number(s):

211-129-9

EINECS Number:

034-002-00-8

Index number:

4 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.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.
After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.
After swallowing
Do not induce vomiting; instantly call for medical help.
Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents
Special hazards caused by the material, its products of combustion or flue gases:

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

Protective equipment:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Toxic metal oxide smoke
Wear self-contained breathing apparatus.
Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

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

Measures for cleaning/collecting:

Dispose of contaminated material as waste according to item 13.

Additional information:

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.

7 Handling and storage

Handling

Information 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.
Open and handle container with care.

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Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

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

No special requirements.

Store away from air.
Store away from water.
Store away from oxidizing agents.**Further information about storage conditions:**Store under dry inert gas.
This product is moisture sensitive.
Keep container tightly sealed.
Protect from humidity and keep away from water.
This product is air sensitive.
Refrigerate
Store in a locked cabinet or with access restricted to technical experts or their assistants.**8 Exposure controls and 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.

Components with critical values that require monitoring at the workplace:Selenium and selenium compounds (as Se)
mg/m³

ACGIH TLV	0.2
Austria MAK	0.1
Belgium TWA	0.2
Denmark TWA	0.1
Finland TWA	0.1; 0.3-STEL
Germany MAK	0.1
Hungary	0.1-STEL
Japan OEL	0.1
Korea TLV	0.2
Netherlands MAC-TGG	0.2
Poland TWA	0.1; 0.3-STEL
Sweden NGV	0.1
Switzerland MAK-W	0.1
United Kingdom TWA	0.1
USA PEL	0.2
No data	

Additional information:**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:**

Use breathing protection with high concentrations.

Protection of hands:

Check protective gloves prior to each use for their proper condition.

Material of gloves

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.

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

9 Physical and chemical properties:**General Information**

Form:	Crystalline
Colour:	White
Smell:	Not determined

Change in condition

Melting point/Melting range:	214-215°C
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:

Not applicable

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Danger of explosion:

Product is not explosive.

Critical values for explosion:

Lower:	Not determined
Upper:	Not determined

Steam pressure:

Not determined

Density

Not determined

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

Materials to be avoided:Air
Water/moisture
Oxidizing agents**Dangerous reactions:**

No dangerous reactions known

Dangerous products of decomposition:

Carbon monoxide and carbon dioxide

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Nitrogen oxides (NOx)
Toxic metal oxide smoke

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11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral	LD50	50 mg/kg (rat)
Dermal	LD50	>50 mg/kg (guinea pig)

Primary irritant effect:

on the skin:

Irritant for skin and mucous membranes.

on the eye:

Irritant effect.

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.
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:

Ecotoxic 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

13 Disposal considerations

Product:

Recommendation

Consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

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 (T5) Toxic substances.

Kemler Number:

60

UN-Number:

3283

Packaging group:

II

Label

6.1

Special marking:

Symbol (fish and tree)

Designation of goods:

3283 SELENIUM COMPOUND, SOLID, N.O.S. (Selenourea)

Limited quantities (LQ)

LQ18

Transport category

2

Tunnel restriction code

D/E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class:

6.1

UN Number:

3283

Label

6.1

Packaging group:

II

Marine pollutant:

No

Correct technical name:

SELENIUM COMPOUND, SOLID, N.O.S. (Selenourea)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class:

6.1

UN/ID Number:

3283

Label

6.1

Packaging group:

II

Correct technical name:

SELENIUM COMPOUND, SOLID, N.O.S.

UN "Model Regulation":

UN3283, SELENIUM COMPOUND, SOLID, N.O.S., 6.1, II

Environmental hazards:

Environmentally hazardous substance, solid; Marine Pollutant

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



T Toxic
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Risk phrases:	23/25 Toxic by inhalation and if swallowed. 33 Danger of cumulative effects. 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases:	20/21 When using do not eat, drink or smoke. 28 After contact with skin, wash immediately with plenty of water. 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 60 This material and its container must be disposed of as hazardous waste. 61 Avoid release to the environment. Refer to special instructions/safety data sheets.
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 danger class 3 (Self-assessment): extremely hazardous for water.

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 Holt

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

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