

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Revision: 09.02.2009

Printing date 09.02.2009

**1 Identification of substance****Product details**

Trade name

**Phenylselenyl bromide**

Stock number:

A11906  
L08946

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG  
Zeppelinstrasse 7  
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com  
www.alfa-chemcat.com

Informing department:

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

Emergency information:

**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**3.1/2 - Fatal if swallowed.  
3.1/2 - Fatal if inhaled.**Danger**

3.2/1C - Causes severe skin burns and eye damage.

**Warning**

4.1/1 - Very toxic to aquatic life with long lasting effects.

Prevention:

Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wear respiratory protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor/physician.  
Specific treatment is urgent (see label).  
Specific treatment (see label).  
Rinse mouth.  
Wash contaminated clothing before reuse.  
Collect spillage.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

Storage:

Disposal:

**3 Composition/information on ingredients**

Chemical characterization:

Designation: (CAS#)

Phenylselenyl bromide (CAS# 34837-55-3): 100%

Identification number(s):

EINECS Number:

252-238-1

Index number:

034-002-00-8

**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.

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.  
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

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

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

Can be released in case of fire:  
Carbon monoxide and carbon dioxide  
Toxic metal oxide smoke  
Hydrogen bromide (HBr)

Protective equipment:

Wear self-contained breathing apparatus.  
Wear full protective suit.**6 Accidental release measures**

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation

Measures for environmental protection:

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.(Contd. on page 2)  
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See Section 13 for information on disposal.

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**7 Handling and storage**

<b>Handling</b>	
<b>Information for safe handling:</b>	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.
<b>Information about protection against explosions and fires:</b>	Keep ignition sources away - Do not smoke.
<b>Storage</b>	
<b>Requirements to be met by storerooms and containers:</b>	No special requirements.
<b>Information about storage in one common storage facility:</b>	Store away from water. Store away from oxidizing agents.
<b>Further information about storage conditions:</b>	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. Store in a locked cabinet or with access restricted to technical experts or their assistants.

**8 Exposure controls and personal protection**

<b>Additional information about design of technical systems:</b>	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
<b>Components with critical values that require monitoring at the workplace:</b>	Selenium and selenium compounds (as Se) mg/m <sup>3</sup>
	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
<b>Additional information:</b>	
<b>Personal protective equipment</b>	
<b>General protective and hygienic measures</b>	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.
<b>Breathing equipment:</b>	Use breathing protection with high concentrations.
<b>Protection of hands:</b>	Check protective gloves prior to each use for their proper condition.
<b>Material of gloves</b>	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.
<b>Eye protection:</b>	Safety glasses
<b>Body protection:</b>	Protective work clothing.

**9 Physical and chemical properties:**

<b>General Information</b>	
<b>Form:</b>	Crystalline powder
<b>Colour:</b>	Red-brown Purple
<b>Smell:</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	60-62°C
<b>Boiling point/Boiling range:</b>	106-108°C (14mm Hg)
<b>Sublimation temperature / start:</b>	Not determined
<b>Flash point:</b>	Not applicable
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Danger of explosion:</b>	Product is not explosive.
<b>Critical values for explosion:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Steam pressure:</b>	Not determined
<b>Density</b>	Not determined

**10 Stability and reactivity**

<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used and stored according to specifications.
<b>Materials to be avoided:</b>	Water/moisture Oxidizing agents
<b>Dangerous reactions:</b>	No dangerous reactions known

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**Dangerous products of decomposition:** Carbon monoxide and carbon dioxide  
Toxic metal oxide smoke  
Hydrogen bromide

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**11 Toxicological information**

**Acute toxicity:**  
**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:**

**Ecotoxicological effects:**  
**Remark:** Very toxic for fish  
**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 (TC2) Toxic substances.  
**Kemler Number:** 68  
**UN-Number:** 2928  
**Packaging group:** II  
**Label:** 6.1+8  
**Designation of goods:** 2928 TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (Phenylselenyl bromide)  
**Limited quantities (LQ):** LQ18  
**Transport category:** 2  
**Tunnel restriction code:** D/E

Maritime transport IMDG/GGVSea:



**IMDG/GGVSea Class:** 6.1  
**UN Number:** 2928  
**Label:** 6.1+8  
**Packaging group:** II  
**Correct technical name:** TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (Phenylselenyl bromide)

Air transport ICAO-TI and IATA-DGR:



**ICAO/IATA Class:** 6.1  
**UN/ID Number:** 2928  
**Label:** 6.1+8  
**Packaging group:** II  
**Correct technical name:** TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (Phenylselenyl bromide)

UN "Model Regulation":

**Environmental hazards:** UN2928, TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S., 6.1 (8), II  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID

**15 Regulatory information**

Designation according to EC guidelines:

Code letter and hazard designation of product:



T Toxic  
N Dangerous for the environment

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 ... (to be specified by the manufacturer).  
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:

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

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**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:** Paul V. Connolly**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)

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