

Revision Date 01-May-2012

Revision Number 3

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description:

Selenium

Cat No.

419270000; 419271000

Synonyms

None

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

Recommended Use

Laboratory chemicals

Uses advised against

No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 3
Specific target organ toxicity - (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 4

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s)

T - Toxic

R-phrases

R33 - Danger of cumulative effects

R53 - May cause long-term adverse effects in the aquatic environment

Risk Combination Phrases

R23/25 - Toxic by inhalation and if swallowed

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SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

H331 - Toxic if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H301 - Toxic if swallowed
H413 - May cause long lasting harmful effects to aquatic life

Precautionary Statements - EU (§28, 1272/2008)

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Selenium 7782-49-2	EEC No. 231-957-4	> 99.5	7782-49-2	T; R23/25 R33 R53	Acute Tox. 3 (H331) Acute Tox. 3 (H301) STOT RE 2 (H373) Aquatic Chronic 4 (H413)	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

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SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.

Inhalation

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

Notes to Physician

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Vapors may form explosive mixtures with air.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

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Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Use only in area provided with appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep under nitrogen.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component
Selenium

European Union	The United Kingdom	France	Belgium	Spain
	STEL: 0.3 mg/m ³ 15 min TWA: 0.1 mg/m ³ 8 hr		TWA: 0.2 mg/m ³ 8 uren	VLA-ED: 0.1 mg/m ³ 8 horas

Component
Selenium

Italy	Germany	Portugal	The Netherlands	Finland
	MAK: 0.02 mg/m ³ 8 Stunden. inhalable fraction Skin Peak: 0.16 mg/m ³ TWA: 0.05 mg/m ³ 8 Stunden. inhalable fraction exposure factor 1	TWA: 0.2 mg/m ³ 8 horas		TWA: 0.1 mg/m ³ 8 tunteina STEL: 0.3 mg/m ³ 15 minuutteina

Component
Selenium

Austria	Denmark	Switzerland	Poland	Norway
STEL: 0.3 mg/m ³ 15 Minuten TWA: 0.1 mg/m ³ 8 Stunden	TWA: 0.1 mg/m ³ 8 timer	STEL: 0.2 mg/m ³ 15 Minuten MAK: 0.05 mg/m ³ 8 Stunden	NDSch: 0.3 mg/m ³ 15 minutach TWA: 0.1 mg/m ³ 8 godzinach	TWA: 0.05 mg/m ³ 8 timer STEL: 0.15 mg/m ³ 15 minutter.

Component
Selenium

Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
TWA: 0.2 mg/m ³	TWA: 0.1 mg/m ³ 8 satima.	TWA: 0.1 mg/m ³ 8 hr.		TWA: 0.1 mg/m ³ 8 hodinách. Ceiling: 0.2 mg/m ³

Component
Selenium

Estonia	Gibraltar	Greece	Hungary	Iceland
TWA: 0.1 mg/m ³ 8 tundides.		TWA: 0.2 mg/m ³		TWA: 0.1 mg/m ³ 8 klukkustundum. Ceiling: 0.2 mg/m ³

Component
Selenium

Latvia	Lithuania	Luxembourg	Malta	Romania
	TWA: 0.1 mg/m ³			TWA: 0.10 mg/m ³ 8 ore STEL: 0.20 mg/m ³ 15 minute

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Component
Selenium

Russia - TWA	Slovak Republic	Slovenia	Sweden	Turkey
TWA: 2 mg/m ³	0.05	TWA: 0.1 mg/m ³ 8 urah inhalable fraction	LLV: 0.1 mg/m ³ 8 timmar. total dust	

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment

Eye Protection

Goggles Face-shield

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Powder, Solid

Appearance

Grey

odor

No information available

pH

No information available.

Vapor Pressure

1 mmHg @ 345 °C

Vapor Density

No information available.

Boiling Point/Range

685°C / 1265°F

Melting Point/Range

217 - 222°C / 422.6 - 431.6°F

Flash Point

No information available.

Autoignition Temperature

No information available.

Water Solubility

Insoluble

Specific Gravity

4.810

Molecular Formula

Se

Molecular Weight

78.96

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

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**Hazardous Polymerization
Hazardous Reactions .**

Hazardous polymerization does not occur.
No information available.

Conditions to Avoid

Incompatible products.

Incompatible Materials

Acids, Strong oxidizing agents, Fluorine, oxygen, Metals.

Hazardous Decomposition Products

None under normal use conditions

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information

No acute toxicity information is available for this product

Component Information

**Component
Selenium**

LD50 Oral	LD50 Dermal	LC50 Inhalation
6700 mg/kg (Rat)		

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Sensitization

No information available.

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Target Organs

No information available.

Endocrine Disruptor Information

None known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

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Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

Other adverse effects

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	3283
Hazard Class	6.1
Packing Group	III
Proper Shipping Name	SELENIUM COMPOUND, SOLID, N.O.S.

ADR

UN-No	3283
Hazard Class	6.1
Packing Group	III
Proper Shipping Name	SELENIUM COMPOUND, SOLID, N.O.S.

IATA

UN-No	3283
Hazard Class	6.1
Packing Group	III
Proper Shipping Name	SELENIUM COMPOUND, SOLID, N.O.S.

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SECTION 14. TRANSPORT INFORMATION

SECTION 15. REGULATORY INFORMATION

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

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Selenium	231-957-4	-		X	X	-	X	-	X	X	X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

AICS - Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R33 - Danger of cumulative effects

R53 - May cause long-term adverse effects in the aquatic environment

R23/25 - Toxic by inhalation and if swallowed

Revision Date 01-May-2012

Revision Summary

Reason for revision Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Selenium**Revision Date 01-May-2012****SECTION 16. OTHER INFORMATION****Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet