

SELENIUM DIOXIDE

SECTION 1: PRODUCT IDENTIFICATION

Product Name: SELENIUM DIOXIDE

Product Code: 553

CAS#: 7446-08-4

Chemical Formula: SeO₂

Molecular Formula: 110.96 g/mol

Formula Weight: NA

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Substances Synonyms: Ammonium bichromate

Formula: (NH₄)₂Cr₂O₇

Molecular Weight: 110.96 g/mol

CAS-No.: 7446-08-4

SECTION 3: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity, (Category 3) H301: Toxic if swallowed.

Acute toxicity, (Category 3) H331: Toxic if inhaled.

Specific target organ toxicity - repeated exposure, (Category 2) H373: May cause damage to organs through prolonged or repeated exposure.

Short-term (acute) aquatic hazard, (Category 1) H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, (Category 1) H410: Very toxic to aquatic life with long lasting effects.

Other hazards: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact: rinse out with plenty of water. Remove contact lenses.

Skin Contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Serious Skin Contact: Not available

Serious Inhalation: Move person into fresh air. If not breathing, give artificial respiration. Consult a physician

If swallowed: immediately make victim drink water (two glasses at most). Rinse mouth with water. Consult a physician.

Serious Ingestion: Not available

Most important symptoms and effects, both acute and delay No data available

Indication of any immediate medical attention and special treatment needed no data available

SECTION 5: FIRE AND EXPLOSION DATA

Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture no data available



Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Specific end use(s) A part from the uses no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Personal protective equipment

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance Form	: White crystalline powder.
Odour	: Not available
Taste	: Not available
Molecular Weight	: Not available
Colour	: Not available
pH	: Not available
Boiling Point	: Not available
Melting Point	: Not available
Critical Temperature	: Not available
Specific Density	: Not Available
Vapor Pressure	: Not Available
Vapor Density	: Not available
Volatility	: Not Available
Odor Threshold	: Not Available
Water/Oil Dist. Coeff.	: Not Available
Ionicity (in Water)	: Not Available
Dispersion Properties	: Not Available



Solubility

: Not available

SECTION 10: STABILITY AND REACTIVITY DATA**Reactivity** No data available**Chemical stability** Stable under recommended storage conditions.**Possibility of hazardous reactions** No data available**Conditions to avoid** No data available**Incompatible materials** Strong oxidizing agents**Hazardous decomposition products** Other decomposition products - No data available**SECTION 11: TOXICOLOGICAL INFORMATION****Information on toxicological effects****Acute toxicity**

LD50 Oral - Rat - 68,1 mg/kg

LC50 Inhalation - 4 h - 0,51 mg/l - dust/mist

Dermal: No data available

Acute toxicity estimate Dermal - 1.860 mg/kg.**Skin corrosion/irritation** No data available.**Serious eye damage/eye irritation**

Eyes - Bovine cornea

Result: Causes serious eye damage. - 4 h

Eyes - Chicken eye

Result: Irreversible effects on the eye - 10 s

Respiratory or skin sensitization No data available.**Carcinogenicity**

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity No data available.**Specific target organ toxicity** - No data available.**SECTION 12: ECOLOGICAL INFORMATION****Toxicity to fish static test**

LC50 - Oncorhynchus mykiss (rainbow trout) - 0,169 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrate's static test

EC50 - Daphnia magna (Water flea) - 0,33 mg/l - 48 h

Toxicity to algae static test

NOEC - Pseudokirchneriella subcapitata (green algae) - 0,0049 mg/l - 72 h

Toxicity to bacteria static test

IC50 - activated sludge - 0,35 mg/l - 4 h (ISO 9509)

Toxicity to fish (Chronic toxicity) flow-through test NOEC - Oncorhynchus mykiss (rainbow trout) - 0,039 mg/l - 30 d**Toxicity to daphnia and other aquatic invertebrates** (Chronic toxicity) semi-static test NOEC - Daphnia magna (Water flea) - 0,039 mg/l - 21 d**Persistence and degradability** No data available**Bio-accumulative potential** No data available**Mobility in soil** No data available**Results of PBT and vPvB assessment** PBT/vPvB assessment not data available**Other adverse effects** No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

UN number:

ADR/RID: 3283

IMDG: 3283

IATA: 3283

UN proper shipping name

ADR/RID: SELENIUM COMPOUND, SOLID, N.O.S. (selenium dioxide)

IMDG: SELENIUM COMPOUND, SOLID, N.O.S. (selenium dioxide)

IATA: Selenium compound, solid, n.o.s. (selenium dioxide)

Transport hazard class(es):

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

Packaging group:

ADR/RID: III

IMDG: III

IATA: III

Environmental hazards:

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

Special precautions for user

Tunnel restriction code: (E)

Further information: No data available

SECTION 15: OTHER REGULATORY INFORMATION

Regulatory information This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

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

Chemical Safety Assessment: For this product a chemical safety assessment was not carried out

SECTION 16: OTHER INFORMATION

References: Full text of H AND R-Statements

H301 Toxic if swallowed.

H331 Toxic if inhaled.

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

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H400 Very toxic to aquatic life.

Other Special Considerations: Not available.

The information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. The information is offered solely for user's obligation to investigate and determine the suitability of the information for their particular purpose.

