



# MATERIAL SAFETY DATA SHEET SDS/MSDS

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Selenium Dioxide

CAS-No. : 7446-08-4

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

### 1.3 Details of the supplier of the safety data sheet

Company : Bio-Chem Chemicals  
5455 Nicholson Road, Science Market  
Ambala Cantt, 133001 - Haryana  
+91 82952 41953  
info@biofinechemical.com - www.biofinechemical.com

### 1.4 Emergency telephone number

Emergency Phone # +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No

1272/2008 Acute toxicity, Oral (Category 3), H301 Acute

toxicity, Inhalation (Category 3), H331

Specific target organ toxicity - repeated exposure (Category 2), H373

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H301 + H331

H373

H410

Toxic if swallowed or if inhaled

May cause damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life with long lasting effects.



Precautionary statement(s)	
P261	Avoid breathing dust.
P273	Avoid release to the environment.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P311	Call a POISON CENTER /doctor.
P501	Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements	none

### 2.3 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. Vesicant.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula	:	SeO <sub>2</sub>
Molecular weight	:	110.96 g/mol
CAS-No.	:	7446-08-4
EC-No.	:	231-194-7
Index-No.	:	034-002-00-8

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>Selenium dioxide</b>			
CAS-No.	7446-08-4	Acute Tox. 3; STOT RE 2;	<= 100 %
EC-No.	231-194-7	Aquatic Acute 1; Aquatic	
Index-No.	034-002-00-8	Chronic 1; H301, H331, H373, H400, H410	

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

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

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

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

### **5.2 Special hazards arising from the substance or mixture**

Selenium/selenium oxides

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### **6.2 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.

### **6.3 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 for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 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. For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### **Personal protective equipment**

##### **Eye/face protection**

Face shield and safety glasses 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.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

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

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

a) Appearance	Form: solid
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 315 °C
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	1 mmHg at 157 °C
l) Vapour density	No data available
m) Relative density	3.950 g/cm <sup>3</sup>
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

**9.2 Other safety information**

No data available

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

Avoid moisture.

### **10.5 Incompatible materials**

Organic materials, Strong acids, Ammonia

### **10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Selenium/selenium oxides  
Other decomposition products - No data available  
In the event of fire: see section 5

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Rat - 68.1 mg/kg(Selenium dioxide)

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Convulsions or effect on seizure threshold.

#### **Skin corrosion/irritation**

No data available(Selenium dioxide)

#### **Serious eye damage/eye irritation**

No data available(Selenium dioxide)

#### **Respiratory or skin sensitisation**

No data available(Selenium dioxide)

#### **Germ cell mutagenicity**

No data available(Selenium dioxide)

#### **Carcinogenicity**

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Selenium dioxide)

#### **Reproductive toxicity**

##### **Specific target organ toxicity - single exposure**

No data available(Selenium dioxide)

##### **Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

#### **Aspiration hazard**

No data available(Selenium dioxide)

#### **Additional Information**

RTECS: VS8575000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea(Selenium dioxide)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 2.9 mg/l - 96.0 h(Selenium dioxide)
Toxicity to algae	Growth inhibition EC50 - Scenedesmus acutus - 0.1 mg/l - 3 d(Selenium dioxide) Growth inhibition LOEC - Pseudokirchneriella subcapitata - 24.63 mg/l - 6 d(Selenium dioxide)

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(Selenium dioxide)

### 12.5 Results of PBT and vPvB assessment

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.

### 12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 3283

IMDG: 3283

IATA: 3283

### 14.2 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)

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

## SECTION 15: Regulatory information

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

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

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## **SECTION 16: Other information**

### **Full text of H-Statements referred to under sections 2 and 3.**

H301	Toxic if swallowed.
H301 + H331	Toxic if swallowed or if inhaled
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.

### **Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.