ZINC SELENIDE  
CAS NO 1315-09-9  
MATERIAL SAFETY DATA SHEET  
SDS/MSDS

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

1.1 Product identifiers  
Product name: Zinc Selenide  
CAS-No.: 1315-09-9

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: Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi -110002  
INDIA  
Telephone: +91 11 49404040  
Email: care@cdhfinechemical.com

1.4 Emergency telephone number  
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [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  
Toxic if swallowed or if inhaled  
H373  
May cause damage to organs through prolonged or repeated exposure.  
H410  
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.

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula : ZnSe
Molecular weight : 144.35 g/mol
CAS-No. : 1315-09-9
EC-No. : 215-259-7
Index-No. : 034-002-00-8

Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
Zinc selenide
CAS-No. 1315-09-9 Acute Tox. 3; STOT RE 2; <= 100 %
EC-No. 215-259-7 Aquatic Acute 1; Aquatic
Index-No. 034-002-00-8 Chronic 1; H301, H331, H373,
H400, H410
M-Factor - Aquatic Acute: 10

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
Zinc/zinc oxides, 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. Air and moisture sensitive.
Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

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: powder
   Colour: yellow
b) Odour No data available
c) Odour Threshold No data available
d) pH No data available
e) Melting point/freezing point No data available
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 No data available
l) Vapour density No data available
m) Relative density 5.42 g/mL at 25 °C
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
Contact with acids liberates very toxic gas. Air Avoid moisture.

10.5 Incompatible materials
Strong acids, Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Zinc/zinc oxides, 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
No data available(Zinc selenide)

Skin corrosion/irritation
No data available(Zinc selenide)

Serious eye damage/eye irritation
No data available(Zinc selenide)

Respiratory or skin sensitisation
No data available(Zinc selenide)

Germ cell mutagenicity
No data available(Zinc selenide)

Carcinogenicity
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Zinc selenide)

Reproductive toxicity
No data available(Zinc selenide)

Specific target organ toxicity - single exposure
No data available(Zinc selenide)

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available(Zinc selenide)

Additional Information
RTECS: Not available

Acute selenium poisoning produces central nervous system effects, which in signs of intoxication can include skin eruptions, lassitude, gastrointestinal odorous ("garlic") breath, and partial loss of hair and nails. Chronic ex pallor, coating of the tongue, anemia, irritation of the mucosa, lumbar p previously mentioned symptoms. Chronic contact with selenium compounds ma moderate emotional instability.(Zinc selenide)

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Zinc selenide)

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available (Zinc selenide)

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. (Zinc selenide)  IMDG: SELENIUM COMPOUND, SOLID, N.O.S. (Zinc selenide)  IATA: SELENIUM COMPOUND, SOLID, N.O.S. (Zinc selenide)

14.3 Transport hazard class(es)
ADR/RID: 6.1  IMDG: 6.1  IATA: 6.1

14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.