



Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

ZnSe Gen - 3mm - 11"x11" Plate

Revision date: 06/15/2007

Supplier

Rohm and Haas Company
100 Independence Mall West
Philadelphia, PA 19106-2399 United States of America

For non-emergency information contact: 215-592-3000

Emergency telephone number

Spill Emergency	215-592-3000
Health Emergency	215-592-3000
Chemtrec	800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Selenium compounds except cadmium sulphoselenide	1315-09-9	100.0%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form	solid
Colour	Reddish-yellow
Odour	Odorless

Hazard Summary

DANGER!

CONTACT WITH ACIDS LIBERATES TOXIC GAS.
TOXIC BY INHALATION AND IF SWALLOWED.
POWDER MAY FORM EXPLOSIVE MIXTURES WITH AIR.

Potential Health Effects

Eyes: Like any foreign body, particles can cause mechanical irritation.

Skin: irritation

Ingestion: May be fatal if swallowed.

Inhalation: nausea

Inhalation of dust can cause the following:

headache
irritation of nose, throat, and lungs

Primary Routes of Entry: Eye contact
Skin contact
Inhalation

Selenium compounds except cadmium sulphoselenide	IRIS	Not classifiable.
Selenium compounds except cadmium sulphoselenide	IRIS	Not classifiable.
Selenium compounds except cadmium sulphoselenide	IARC	Classification not possible from current data.

4. FIRST AID MEASURES

Inhalation: If unconscious place in recovery position and seek medical advice. Keep patient warm and at rest. Call a physician or poison control centre immediately. Give artificial respiration if breathing has stopped. Move to fresh air.

Skin contact: Take off contaminated clothing and shoes immediately. After contact with skin, wash immediately with plenty of water. Wash contaminated clothing before reuse.

Eye contact: Immediately flush eye(s) with plenty of water.

Ingestion: If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Rinse mouth.

5. FIRE-FIGHTING MEASURES

Flash point	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Thermal decomposition	During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition.
Suitable extinguishing media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during fire fighting: Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection.

Use personal protective equipment.

Evacuate personnel to safe areas.

MATERIAL IS TOXIC. If exposed to material during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information. Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure

Controls/Personal Protection, for recommendations.

Environmental precautions

If the product contaminates rivers and lakes or drains inform respective authorities.

Do not flush into surface water or sanitary sewer system.

NOTE: Spills on porous surfaces can contaminate groundwater.

Should not be released into the environment.

Do not allow material to contaminate ground water system.

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Clean contaminated surface thoroughly.

Clean up promptly by sweeping or vacuum.

Additional advice: See SECTION 13, Disposal Considerations, for information regarding the disposal of contained spills.

7. HANDLING AND STORAGE

Handling

Smoking, eating and drinking should be prohibited in the application area. Use only in an area equipped with a safety shower. Use only in area provided with appropriate exhaust ventilation. For personal protection see section 8. Plan first aid action before beginning work with this product. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied. Wear personal protective equipment. This material is TOXIC. Avoid formation of respirable particles. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid exceeding of the given occupational exposure limits (see section 8). Provide sufficient air exchange and/or exhaust in work rooms.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Storage

Storage conditions: Keep container tightly closed in a dry and well-ventilated place. Store in a place accessible by authorized persons only.

Other data: No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value
Selenium compounds except cadmium sulphoselenide	ACGIH	TWA	0.2 mg/m ³
	OSHA_TRANS	PEL	0.2 mg/m ³
	Z1A	TWA	0.2 mg/m ³

Eye protection: Use chemical splash goggles (ANSI Z87.1 or approved equivalent).

Hand protection: Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Chemical-resistant gloves should be worn whenever this material is handled. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Skin and body protection: Safety shoes complete suit protecting against chemicals Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection: None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. When dusty conditions are encountered, wear a properly fitted NIOSH approved (or

equivalent) half-mask, air-purifying respirator. A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use.

Hygiene measures: Keep working clothes separately. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink. When using do not smoke.

Protective measures: Do not breathe dust. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Engineering measures: None required under normal operating conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	Reddish-yellow
Odour	Odorless
pH	not applicable
Flash point	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	Not Determined
Relative vapour density	Not available
Water solubility	insoluble
Relative density	5.30
Evaporation rate	Not available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Conditions to avoid	Static discharge
Materials to avoid	Incompatible with strong acids and oxidizing agents.
polymerization	Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

No toxicity data are available for this material.

12. ECOLOGICAL INFORMATION

Aquatic toxicity is unlikely due to low solubility.

13. DISPOSAL CONSIDERATIONS

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities. Do not flush into surface water or sanitary sewer system.

NOTE: Spills on porous surfaces can contaminate groundwater.

Should not be released into the environment.
Do not allow material to contaminate ground water system.
Prevent further leakage or spillage if safe to do so.

Disposal

Waste Classification: 40 CFR 261.20 - .24 - Characteristic Waste Selenium (7782-49-2), D010, RQ 10 lbs.

For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations (see 40 CFR Part 268).

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

IMO/IMDG

Not regulated (Not dangerous for transport)

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations

15. REGULATORY INFORMATION

Workplace Classification

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is not a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

SARA TITLE III: Section 311/312 Categorizations (40CFR370): Chronic Health Hazard

SARA TITLE III: Section 313 Information (40CFR372)

SARA Title III Components:	Selenium compounds except cadmium sulphoselenide	1315-09-9
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CERCLA Information (40CFR302.4)

CERCLA Components:	Selenium compounds except cadmium sulphoselenide	1315-09-9	10 lbs RQ
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US. Toxic Substances Control Act (TSCA) All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California (Proposition 65)

This product contains a component or components known to the state of California to cause cancer:

16. OTHER INFORMATION

Hazard Rating

	Health	Fire	Reactivity
HMIS	1*	0	0

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
BAC	Butyl acetate
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit (STEL):
TLV	Threshold Limit Value
TWA	Time Weighted Average (TWA):
	Bar denotes a revision from prior MSDS.

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

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