



MATERIAL SAFETY DATA SHEET
COMPLIES WITH 29 CFR 1910.1200.
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 05-18-07

CHEMICAL IDENTITY

LABEL IDENTITY	ZINC SELENIDE
CHEMICAL NAME/SYNONYMS	RAYTRAN ZnSe, KODAK IRTRAN-4
FORMULA	ZnSe
HAZARDOUS INGREDIENTS	% ATOMIC
ZINC	50%
SELENIUM	50%

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	Yellow transparent solid, odorless
BOILING POINT, 760 MM HG	Sublimes
VAPOR DENSITY (AIR=1)	5.27
VAPOR PRESSURE @ 20°	NA
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	ND
EVAPORATION RATE (H2O=1)	ND
SOLUBILITY IN WATER & BY WEIGHT	Insoluble
MELTING POINT	1525°C

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (° C)	NA
FLAMMABILITY	Non-flammable, non-explosive
EXTINGUISHING MEDIA	Use dry chemical, CO₂.
SPECIAL FIRE FIGHTING PROCEDURES	ND
UNUSUAL FIRE & EXPLOSION HAZARDS	ND



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HEALTH HAZARD INFORMATION

THRESHOLD LIMIT VALUE **ZINC OXIDE - 5mg/m³**
SELENIUM AND COMPOUNDS - .2mg/m³

HMIS RATING:
HEALTH: **ND** FLAMMABILITY: **ND** REACTIVITY: **ND** PERSONAL PROTECTION: **ND**

ROUTES OF ENTRY INHALATION: **Yes**
SKIN: **Yes**
INGESTION: **Yes**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **NO DATA**

EFFECTS OF OVEREXPOSURE (acute and chronic):

ZnSe - Effects are not known, but some Zinc and Selenium can be formed, such as: Zinc Oxide - Chills and Fever. Selenium and Compounds - Acute exposure might produce sternal pain, cough, nausea, pallor, coated tongue, gastro-intestinal disorders, nervousness and/or conjunctivitis. A garlic odor of the breath or sweat may occur.

CARCINOGENICITY: **ND** NTP: **ND** IARC MONOGRAPHS: **ND** OSHA REGULATE: **ND**

EMERGENCY FIRST AID PROCEDURES: *In dust form:*
INGESTION: **Call physician**
INHALATION: **Remove from exposure, treat symptomatically, call physician**
SKIN CONTACT: **Wash with plenty of water, call physician**
EYE CONTACT: **Flush with plenty of water, call physician**

REACTIVITY DATA

STABILITY	Stable
CONDITIONS CONTRIBUTING TO UNSTABILITY	Extreme heat greater than 500°C could result in decomposition
INCOMPATIBILITY (MATERIALS TO AVOID)	Strong acids, strong bases
HAZARDOUS DECOMPOSITION PRODUCTS	Selenium/Oxides of Selenium, ZnO
HAZARDOUS POLYMERIZATION	Will Not Occur
CONDITIONS TO AVOID	ND



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SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **NA**

WASTE DISPOSAL METHOD:
Dispose of with normal refuse.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION

OSHA approved respiratory with fume type cartridge

VENTILATION

***In case of vaporization:* leave room and allow dust to settle. Clean all surfaces. If room has ventilation, allow for several air changes. Locate exhaust near location of ZnSe processing or use if failure by melting is**

likely.

PROTECTIVE GLOVES

ND

EYE PROTECTION

ND

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE: if material is to be machined, ground or polished, processes should be done wet so as to minimize dust which could result in inhalation. Good work practices such as keeping hands clean and not letting slurry splash significantly should be followed so that transferal to mouth by contamination on the hands or clothing followed by ingestion will not occur. Wash hands thoroughly after handling material and before eating.

If parts are dropped or otherwise broken, sweep up pieces which may have sharp edges as one would clean up broken glass and safely transfer to disposal container. Large pieces may have salvage value.

TRANSPORTATION REQUIREMENTS

NO DATA

OTHER PRECAUTIONARY LABELING

NO DATA

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NA= NOT APPLICABLE

ND= NO DATA FOUND

NR=NOT RECORDED