



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: GASIR-1

SECTION 1 – HAZARDS IDENTIFICATION

Remarks : Hazards identified or described in this document (if any) only apply in case of exposure to dust, fumes or particles of the composing chemical or chemicals of this product generated through specific treatments or manipulations such as polishing, welding, heat treatment etc.

Physical state: Solid. [Glass.]

Odor: Odorless.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Hazard statements: MAY CAUSE EYE IRRITATION.

Precautionary measures: Avoid contact with eyes. Wash thoroughly after handling.

Routes of entry : Not available.

Potential acute health effects

Eyes : Slightly irritating to the eyes.

Skin: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Potential chronic health effects

Carcinogenic effects: No known significant effects or critical hazards.

Mutagenic effects: No known significant effects or critical hazards.

Teratogenicity /Reproductive toxicity: No known significant effects or critical

hazards.

Medical conditions aggravated by overexposure: No known significant effects or critical hazards.

Additional hazards:

Specific hazard /Remark: This product is within the Permissible Exposure Limits of OSHA 29 CFR 1910.1018

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Name: Germanium arsenide selenide

GAS number: 57673-50-4

SECTION 3 – FIRST AID MEASURES

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin contact : Not applicable.

Inhalation: Not applicable.

Ingestion: Not applicable.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flammability of the product: No specific fire or explosion hazard.

Hazardous combustion products: Decomposition products may include the following materials: metal oxide/oxides

Extinguishing media

Suitable: Use an extinguishing agent suitable for the surrounding fire.

Not suitable: None known.

Special exposure hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for firefighters: No special protective clothing is required.

SECTION 5 – ACCIDENTAL RELEASE MEASURES

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

SECTION 6 – HANDLING AND STORAGE

Handling : No special measures required.

Storage : No special measures required.

SECTION 7 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Product name: Germanium arsenide selenide

Exposure limits: ACGIH TLV (United States, 1/2005). Notes: Particulates (Insoluble)
Not Otherwise Specified (PNOS)

TWA: 10 mg/m³ 8 hours. Form: Inhalable

TWA: 3 mg/m³ 8 hours. Form: Respirable

Engineering measures: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection/ Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General information: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

SECTION 8 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state and Appearance: Solid. [Glass.]

Color: Black

Odor: Odorless

Molecular formula: Ge₂₂As₂₀Se₅₈

Melting/freezing point: >360°C (>680°F)

Relative density: 4.41

VOC: 0% (w/w)

Oxidizing properties: Not available.

Solubility at room temperature g/l: <0.0001 g/l

Flammability of the product: Non-flammable.

SECTION 9 – STABILITY AND REACTIVITY

Stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

(*NA) = Not Applicable