

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME: **GALLIUM ARSENIDE**

INGREDIENTS (Typical Values - Not Specifications):

Gallium Arsenide 99.00%

PRODUCT CLASSIFIED AS: NON-HAZARDOUS

WARNING STATEMENT: None considered Necessary

## SECTION 1 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: N.A.(\*). SOL. IN WATER: INSOLUBLE

VAP. PRESSURE: N.A. SP. GRAVITY: 5.31

VAP. DENSITY (AIR-1): N.A. % VOLATILE (BY VOL): 0

APPEARANCE: SILVERY-GRAY, BRITTLE. METALLIC LUMPS

ODOR: N.A.

## SECTION 2 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N.A.

EXTINGUISHING MEDIA: N.A.

FLAMMABLE LIMITS (STP IN AIR): NON-FLAMMABLE

SPECIAL FIRE FIGHTING EQUIPMENT AND HAZARDS: None required. USE

Extinguisher suitable for surrounding fire. GALLIUM ARSENIDE fumes in air at melting point.

## SECTION 3 - REACTIVITY DATA

STABILITY: Stable compound

INCOMPATIBILITY: None known

HAZARDOUS DECOMPOSITION PRODUCTS: None known

HAZARDOUS POLYMERIZATION: N.A.

(\*)N.A - Not Applicable

## SECTION 4 - SPILL, LEAK AND DISPOSAL PROCEDURES

ACTION TO TAKE FOR SPILLS: Contain spill. Clean up and transfer spilled material to separate container for recovery or disposal.

WASTE DISPOSAL METHOD: Due to value of scrap material, waste should be collected and returned to a vendor for salvage and/or reclamation. Non-reclaimable material should be disposed of in accordance with appropriate local, state or federal regulations.

## SECTION 5 - HEALTH HAZARD DATA

OSHA has not established a permissible exposure level (PEL) for GALLIUM ARSENIDE nor has the American Conference of Governmental Hygienists (ACGIH) set a threshold limit value (TLV).

OSHA has set a PEL for arsenic compounds of 0.01 milligrams per cubic meter determined as a TWA exposure for up to 8 hours. (Source:

OSHA. 1910.1000, Subpart Z, Table Z-1, revised).

A TLV or PEL has not been set for gallium compounds.

POSSIBLE EFFECTS OF OVEREXPOSURE: No adverse health effects should occur from exposure to GALLIUM ARSENIDE material. Under extreme conditions, individual components of GALLIUM ARSENIDE material may cause non-specific symptoms, such as, nausea, vomiting, diarrhea, hot flashes and progressive anxiety. However, separation of the individual components of GALLIUM ARSENIDE is not expected to occur.

## SECTION 6 - FIRST AID PROCEDURES

EYES: Flush with flowing water for 15 minutes after contact with dust or fumes.

SKIN: Flush with plenty of water after contact with dust or fumes.

INHALATION: If ill effects develop, remove person to fresh air, keep person warm and quiet. Seek medical help.

INGESTION: Not a problem. If GALLIUM ARSENIDE is swallowed, induce vomiting. Seek medical help.

(\*)N.A - Not Applicable

## SECTION 7 - SPECIAL HANDLING INFORMATION

VENTILATION: Should be sufficient to remove any mist or odors, which evolve during processing. Forced exhaust air of 100 lineal feet per minute (lfm) face velocity should be adequate. Avoid breathing fumes and dusts because of potential arsenic content.

RESPIRATORY PROTECTION: Not required if adequate ventilation is provided. In unventilated areas a high efficiency respirator, approved for toxic dusts, should be used.

PROTECTIVE CLOTHING: Rubber gloves and plastic aprons should be provided to protect workers from splash of cutting or polishing compounds used for processing GALLIUM ARSENIDE.

EYE PROTECTION: Chemical workers goggles or plastic face shields should be used to provide eye protection from dusts, fumes, mists or flying particles should product break or fragment.

#### **SECTION 8 - SPECIAL PRECAUTIONS & ADDITIONAL INFORMATION**

No special safety precautions are required in handling, storing or processing GALLIUM ARSENIDE.

However, mechanical polishing may cause emission of unpleasant sulfide-like odor. This does not represent a significant exposure or represent a health hazard as the threshold of smell for these odors is much lower than the TLU's established for the individual components. Increasing the exhaust ventilation will remove the odor problem.

#### **SPECIAL NOTE:**

This Material Safety Data Sheet is considered to be an essentially similar form to OSHA Form-20 (a non-mandatory form) and is submitted in lieu thereof.

This data is furnished gratuitously, independent of any sale of the product only for your investigation and independent verification. While the information provided is believed to be correct and the most reliable references available have been used, AMORPHOUS MATERIALS, INC. makes no representation or warranty as to the accuracy or correctness of the information contained herein.

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