



**INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®  
INDIUM CORPORATION (SUZHOU)®  
SAFETY DATA SHEET**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** GERMANIUM  
Industrial use - Metal alloy

Germanium is a hard, brittle, grayish white element. It is transparent to infrared light, which makes it useful for optical materials. It is widely used as semiconductor and as an alloying agent.

**SDS Number:** SDS- 4641

**Revised Date:** 31 AUGUST 2016

**MANUFACTURER:**

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## 2. HAZARDS IDENTIFICATION

### PRIMARY ROUTES OF ENTRY:

Eye   
 Inhalation   
 Skin   
 Ingestion   
 NTP   
 IARC   
 OSHA   
Not Listed

### Carcinogen listed in

GHS



Signal Word      Warning

### Hazard statement(s)

H315              Causes skin irritation  
 H319              Causes serious eye irritation  
 H335              May cause respiratory irritation

### Precautionary statement(s)

P233              Keep container tightly closed  
 P261              Avoid breathing dust/fume/gas/mist/vapors/spray  
 P270              Do not eat, drink or smoke when using this product  
 P273              Avoid release to the environment  
 P280              Wear protective gloves/protective clothing/eye protection/face protection  
 P362              Take off contaminated clothing and wash before reuse  
 P301 + P314      IF SWALLOWED: Get Medical advice/attention if you feel unwell  
 P302 +P352      IF ON SKIN: Wash with plenty of soap and water  
 P304 + 341      IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
 P305 + 351      IF IN EYES: Rinse continuously with water for several minutes (15 mins)

### Classification:

Skin irritation- Category 2  
 Eye irritation – Category 2A  
 Specific target organ toxicity- single exposure- Category 3, respiratory system

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:**      Causes eye irritation. May cause serious eye irritation.

**Ingestion:**        May be harmful.

**Inhalation:**        May cause irritation to upper respiratory tract.

**Skin Contact:**     Causes skin irritation.

**Chronic:**            No information available

**Note:**                **The Indium Corporation does not recommend, manufacture, market or endorse any of its product's for human consumption.**



## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Good general exhaust ventilation should be sufficient to control airborne levels.

**Personal protection:**

**Eyes:** Chemical safety glasses/goggles. Face shield for splash or dust areas.

**Respirator:** An authority approved or compliant marked or other applicable air-purifying respirator with a fume/dust cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or metal is in the form of a powder.

**Skin:** Compatible hot gloves when necessary. Protective outer garment, apron and sleeves as appropriate.

**Other:** Eyewash fountain in work area. Avoid the use of contact lenses in high fume/splash areas.

**Work/Hygienic Practices:** Maintain good housekeeping. Clean up spills immediately.

Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Metal alloy(greyish)

**Boiling Point:** 2830C

**Odor:** No odor.

**Melting Point:** 937C

**Specific Gravity:** 5.35 g/cm<sup>3</sup>

**pH:** Not applicable

**Vapor Pressure:** Not applicable.

**Vapor Density:** (air=1) Not applicable.

**Molecular Weight:** 72.64 g/mol

## 10. STABILITY AND REACTIVITY

**General:** Stable.

**Conditions to Avoid:** Strong oxidizing agents, halogens

**Incompatible Materials:** Not established

**Hazardous Decomposition / Combustion:** Germanium oxides

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:** NTP: No

OSHA: No

IARC: No

**LD50:** Not established.

**LC50:** Not established.

**Other:** RTECS Number: LY5200000

LC50: rat inhalation >5,340 mg/m<sup>3</sup>/4hr

## 12. ECOLOGICAL INFORMATION

Germanium is insoluble and presents minimal environmental risk.

## 13. DISPOSAL CONSIDERATION

**Waste Disposal Method:** Dispose of in accordance with all Federal, State and Local environmental regulations. Recycle or reclaim/reuse metal.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Non - hazardous for shipping, (ground/IATA/Ocean).

North American Emergency Guide Book – Not classified

UN - none

## 15. REGULATORY INFORMATION

The information in this Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated hereunder (29 CFR 1910.1200 ET. SEQ.).

Warning – California Safe Drinking Water Standard, Prop 65 (applicable in California): This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (trace levels of lead)

SARA 313 Listing - 40 CFR 372.65 - None

Ingredients are listed on the EPA TSCA Inventory.

This product has been classified in accordance with the hazard criteria of the Mexican regulations: NOM-018-STPS-2015 and NOM-010-STPS-2014.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

Canadian WHMIS classification: Not controlled.

This product has been classified in accordance with the guidelines set by the Dept. of Industrial Health of the Republic of Singapore.

### Malaysia:

This product has been classified in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS). (GHS)

### In China:

Decree No. 591: Regulations on the Control over Safety of Hazardous Chemicals  
GB 30000.2-29-2013, Rules for classification and labeling of chemicals. (GHS)

GB/T 16483-2008, GB/T 17517-2013

This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007.

All ingredients are listed on the China Chemical Inventory.

## 16. OTHER INFORMATION

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	2
	<b>Fire:</b>	0
	<b>Reactivity:</b>	0

**Revised Date:** 31 AUGUST 2016

**Prepared by:** Nancy Swarts, Indium Corporation of America

**Approved by:** Nancy Swarts, Indium Corporation of America

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