SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: GALLIUM OXIDE

SDS Number: SDS- 4327

Revised Date: 7 FEBRUARY 2018

Industrial Use Only - Inorganic oxide

MANUFACTURER:

In America:
The Indium Corporation of America®.
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Information: (315) 853-4900
nswarts@indium.com

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Information: +44 [0] 1908 580400

In Asia:
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Asia-Pacific Operations-Singapore
29 Kian Teck Avenue
Singapore 628908
Information: +65 6268-8678

EMERGENCY PHONE:
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887

In China:
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No. 428 Xinglong Street
Suzhou Industrial Park
Suchun Industrial Square
Unit No. 14-C
Jiangsu Province, China 215126
Information: (86) 512-6283-4900
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
Eye  XInhalation  XSkin  XIngestion  NTP  IARC  OSHA  XNot Listed

No GHS hazards.

Precautionary statement(s)
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)

POTENTIAL HEALTH EFFECTS:

Eye Contact:  May cause eye irritation.

Ingestion:  May be harmful.

Inhalation:  May cause irritation to upper respiratory tract.

Skin Contact:  May be harmful if absorbed through the skin.

Chronic:  No information available

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

Warning:  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)
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL</th>
<th>TLV-TWA</th>
<th>TLV-STELE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GALLIUM OXIDE</td>
<td>100</td>
<td>12024-21-4/234-691-7</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

N.E. = Not established

Formula: Ga₂O₃

4. FIRST AID MEASURES

Eye Contact: Hold eyelids apart and flush eyes with plenty of tepid water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion: If patient is conscious, ONLY induce vomiting as directed by trained personnel. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: NA

Method: Use extinguishers appropriate for the surrounding fire conditions, such as water spray all purpose-type foam or dry chemical.

Extinguishing Media:

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established, not flammable. Avoid dust generation.

Special Fire Fighting Procedures: Firefighters must wear NIOSH approved or equivalent self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:

Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section) Avoid dust generation. Vacuum spills. Ventilate area. Dispose of following all Federal, State and Local regulations.

7. HANDLING AND STORAGE

Handling Precautions: Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid dust generation.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue.
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.

Respirator: An authority approved or compliant marked air-purifying respirator with a fume/dust cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated. Dust mask may be worn depending on work conditions.

Skin: Compatible chemical resistant gloves. Protective outer garment, apron and sleeves as appropriate.

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

Work/Hygienic Practices: 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White, fine powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight characteristic odor.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>5.88 g/cm³</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor Density (air=1)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Not established.</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>187.44</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Strong oxidizing agents

Incompatible Materials: Not established

Hazardous Decomposition / Combustion: Unknown

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity:
- NTP: No
- OSHA: No
- IARC: No

LD₅₀: Not established.

LC₅₀: Not established.

Other: RTECS Number: LW9650000

12. ECOLOGICAL INFORMATION

No testing information available.
13. **DISPOSAL CONSIDERATION**

**Waste Disposal Method:** Dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Special Waste Regulations.

14. **TRANSPORT INFORMATION**

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Non hazardous under shipping modes.

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.).

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

WHMIS: Not classified because of insufficient information.

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

**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

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

Warning – California Safe Drinking Water Standard, Prop 65: 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 listed metals)

SARA 313 Listing - 40 CFR 372.65 - None

All ingredients are listed on the EPA TSCA Inventory.
### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating</th>
<th>Health:</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire:</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

**Revised Date:** 7 FEBRUARY 2018  
**Prepared by:** Nancy Swarts, Indium Corporation of America  
**Approved by:** Nancy Swarts, Indium Corporation of America

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