SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDIUM NITRATE SOLID

SDS Number: SDS-IB005 Revised Date: 7 MARCH 2018

Product Use: Indium Nitrate InN₂O₉, Molecular weight 300.83 g/mol

MANUFACTURER:

In America:
The Indium Corporation of America®.
34 Robinson Rd., Clinton, NY 13323
Information: (315) 853-4900
nswarts@indium.com

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

In Europe:
The Indium Corporation of America® (European Operations)
7 Newmarket Ct
Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

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

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

Page 1 of 7
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
- Eye (X)  
- Inhalation (X)  
- Skin (X)  
- Ingestion (X)

CARCINOGEN LISTED IN:  
- NTP  
- IARC  
- OSHA  
- Not Listed (X)

GHS

Signal Word: Warning

Hazard statement(s)
- H272 May intensify fire; oxidizer
- H302 Harmful if swallowed
- H315 Causes skin irritation
- H319 Cause severe eye irritation
- H335 May cause respiratory irritation

Precautionary statement(s)
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P220 Keep/Store away from clothing/combustible materials
- P221 Take precaution to avoid mixing with combustibles
- P233 Keep container tightly closed
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 Wash hands thoroughly after handling
- 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 +P364 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 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)
- P370 + P378 IN CASE OF FIRE: Use dry sand, dry chemical or alcohol resistant foam to extinguish
- P501 Dispose of contents/container by recycling if possible otherwise dispose of via approved handler

Classification:
- Oxidizing solids (Category 2)
- Acute toxicity, Oral (Category 4)
- Skin irritant (Category 2)
- Eye irritant (Category 2A)

POTENTIAL HEALTH EFFECTS:

Eye Contact: May cause severe irritation and possible burns.

Ingestion: Harmful if swallowed. May cause burns to the gastrointestinal tract. Kidney and liver damage from injected indium compounds has been reported based on limited animal testing.

Inhalation: May cause respiratory irritation. Severe exposure could cause pulmonary damage. Inhalation may cause lung edema. The symptoms may be aggravated by physical effort.

Skin Contact: Harmful by skin contact or causes irritation.

Chronic: Kidney and liver damage from injecting indium compounds has been reported based on limited
animal testing but no systematic effects from human exposure has been reported.

Other: Hygiene practices should be in place when handling this product. Avoid breathing dust. Pregnant women should take measures to avoid exposure.

The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

Warning: This product can expose you to chemicals including [Trace lead] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

3. COMPOSITION / INFORMATION ON INGREDIENTS

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<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL</th>
<th>TLV-TWA</th>
<th>TLV-STEL</th>
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<td></td>
<td></td>
<td>mg/m³</td>
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<td>0.1 (as indium)</td>
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</tbody>
</table>

N.E. = Not established   * Indium CAS# 7440-74-6

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: Oxidizer
Method: Not established.
Auto-ignition Temperature: Not established.
Flammable Limits: Limits not established.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Isolate spill and clean up with vacuum. Avoid conditions, which create fumes or fine dust. DO NOT SWEEP SOLIDS. Do not raise dust levels. Place material in proper waste container. An approved air purifying respirator with particulate cartridge and other personal protective equipment such as gloves is recommended. Keep sources of ignition away. Dispose of in accordance with Federal, State and Local regulations. In Europe dispose of following the Special Waste Regulations. Indium may have reclaim value.

7. HANDLING AND STORAGE

Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Wear appropriate personal protective equipment. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed.

Storage Precautions: Store product in tightly capped original containers in a cool, well ventilated and dry area. Keep away from sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local and/or Mechanical (general) exhaust ventilation is recommended to control any air contaminants.

Personal protection:

Eyes: Wear chemical safety glasses/goggles. Face shield for splash hazards.

Respirator: A NIOSH approved air-purifying respirator with a particulate filter is recommended under certain circumstances where airborne concentrations are expected to be elevated.

Skin: Gloves are recommended when handling solids.

Other: Lab coat, apron & eyewash fountain in work area. Avoid the use of contact lenses in high fume areas.

Work/Hygienic: Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential. 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: White to colorless
Boiling Point: Decomposes

Odor: Slight nitric acid odor
Melting Point: - 2 H2O @100C

Specific Gravity: NA
pH: Not applicable

Vapor Pressure: Not applicable.
Solubility in Water: Soluble in water

Vapor Density: Not applicable
Molecular Weight: 300.85
10. STABILITY AND REACTIVITY

General: Stable.
Conditions to Avoid: Not established.
Incompatible Materials: Nitrates
Hazardous Decomposition / Combustion: Toxic fumes NOₓ may form at elevated temperatures.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: National Toxicology Program (NTP): No
Occupational Safety & Health Administration (OSHA): No
U.N. International Agency for Research on Cancer (IARC): No
LD50: No information available
Irritancy of Product: May be an irritant
Mutagenicity: Not established
Sensitization to Product: Not established
Teratogenicity: Not established
Reproductive Toxicity: Not established
Synergistic Products: Not established

RTEC# NL1750000
LD50 Oral-mouse-3,300 mg/kg
Reproductive toxicity-hamster-intravenous
Effects on Fertility: Post-implantation mortality

Developmental toxicity-hamster-intravenous
Specific developmental abnormalities: musculoskeletal system
Developmental toxicity – hamster-intravenous
Effects on Embryo or fetus: fetal death

12. ECOLOGICAL INFORMATION

No information is 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.

UN 1477, Nitrates, Inorganic, N.O.S., 5.1, PG III
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: This product can expose you to chemicals including [Trace lead] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

California Prop 65: 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 impurities: listed metals).

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 Exposure Limit of Hazardous Agents in the Workplace, GBZ2-2007.

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

SARA 313 listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory and Canadian Domestic Substance List.
16. OTHER INFORMATION

HMIS Hazard Rating:
- Health: 2
- Fire: 0
- Reactivity: 2
- Special Hazard: OX

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

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