1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: GALLIUM NITRATE HYDRATE

SDS NUMBER: SDS-5816

REVISED DATE: 22 JANUARY 2015

PRODUCT: Industrial Use – GaN₃O₉·xH₂O.

MANUFACTURER:

In America:
The Indium Corporation of America
1676 Lincoln Ave., Utica NY 13502
Information: (315) 853-4900
nswarts@indium.com

In Europe:
Indium Corporation of Europe
7 Newmarket Ct.
Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

In Asia:
Indium Corporation of America
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:
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
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
√ Eye  √ Inhalation  √ Skin  √ Ingestion  

CARCINOGEN LISTED IN:  
NTP  IARC  OSHA  √ Not Listed

GHS

Signal Word: Danger
Hazard statement(s)
H272 May intensify fire; oxidizer
H315 Causes skin irritation
H319 Causes serious 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
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 (or hair): 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 for extinction
P405  Store locked up
P501  Dispose of contents/container in accordance with local/regional/national/international regulations

GHS Classification:
Oxidizing solids (Category 2)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific target organ toxicity- single exposure (Category 3) (inhalation-may cause respiratory irritation)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Causes eye irritation.
Ingestion: May be harmful if swallowed.

Inhalation: May cause respiratory irritation. May be harmful if inhaled.
Skin Contact: Causes skin irritation. May be harmful if absorbed through the skin.

Note: The Indium Corporation does not recommend, manufacture, market or endorse any of its products 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 listed metals).

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry/ #EINECS</th>
<th>PEL mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>GALLIUM NITRATE</td>
<td>100</td>
<td>69365-72-6/236-815-5</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

Symbol: Xi O Risk Phrases: R8, R36/38 N.E. = Not established

PRODUCT DOES NOT CONTAIN ANY EU REACH SVHC (SUBSTANCES OF VERY HIGH CONCERN)

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: Not established. Method: Not established.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established, not flammable or combustible. However, solution is an oxidizer.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Water spray.

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

Explosion Data - Sensitivity to: Mechanical Impact: Not established

Static Discharge: Not established

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Ventilate area. Keep sources of ignition away. Avoid dust generation. Do not breathe vapors, mist or gas. Wear personal protective equipment. Keep unauthorized people away. Do not allow material to be released to the environment. Sweep up and shovel or use grounded vacuum or wet brushing for clean-up. Dispose of in accordance with regulations.
7. HANDLING AND STORAGE

Handling  Use good housekeeping practices.

Precautions:  Keep away from sources of ignition. Wear personal protective clothing when handling material. Avoid contact with skin and eyes. Avoid dust generation.

Storage Precautions: Store product in a cool, dry, ventilated area away from incompatible materials. Protect from moisture. Hygroscopic. Handle under inert gas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is recommended, 100 feet per minute face velocity.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield should be used if there is a splash hazard.

Respirator: A NIOSH approved or EU compliant CE marked air-purifying full - face respirator with a particulate cartridge may be necessary if contaminants are elevated. Proper engineering controls should be in place.

Skin: Rubber or chemical resistant gloves.

Other: Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume/dust areas.

Work/Hygienic: Maintain good housekeeping. Clean up spills immediately. Wash hands thoroughly with soap and water immediately upon leaving the work area. Refrain from eating or smoking in work areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Crystalline form

Boiling Point: No information available

Odor: None

Melting Point: 110C (230F)

Specific Gravity: Not established

pH: No information

Vapor Pressure: Not applicable.

Solubility: Not available

Vapor Density: (air=1) Not applicable.

Molecular Weight: Not available

10. STABILITY AND REACTIVITY

General: Stable under storage conditions.

Conditions to Avoid: Avoid moisture.

Incompatible Materials: Strong reducing agents, strong acids

Hazardous Decomposition / Combustion: Emits NO\(_x\), gallium oxides when heated to decomposition.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity Listing:

National Testing Program (NTP): No

Occupational Safety & Health Administration (OSHA): No

U.N. International Agency for Research on Cancer (IARC): No
12. ECOLOGICAL INFORMATION
No information available

13. DISPOSAL CONSIDERATION
Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations

14. TRANSPORT INFORMATION
Transport in accordance with applicable regulations and requirements.

UN 1477, Nitrates, Inorganic, N.O.S., 5.1, PG II

North America Emergency Guide Book 2012 - Guide #140
Marine Pollutant: No
PIH: No

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 guidelines set by the Dept of Industrial Health of the Republic of Singapore.

This product has been classified in accordance with the Mexican regulations NOM-018-STPS-2000 and NOM-010-STPS-1999.

This product has been classified using the Chinese Occupational Exposure Limit of Hazardous Agents in the Workplace, GBZ2-2002.
SARA 313 Listing - 40 CFR 372.65  None

All ingredients are listed on the EPA TSCA Inventory.

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 listed metals).

Ingredients are listed on the Canadian Domestic Substance List.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product:  Xi  O

Risk Phrases:

R 8  Contact with combustible material may cause fire.
R36/38  Irritating to eyes and skin

Safety Phrases:

S17  Keep away from combustible material
S20/21  When using do not eat, drink or smoke
S23  Do not breathe fumes/gas/vapor/spray
S24/25  Avoid contact with skin and eyes
S26  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39  Wear suitable protective clothing, gloves and eye/face protection
S28  After contact with skin wash immediately with plenty of soap and water
S45  In case of accident or if you feel unwell, seek medical advice immediately.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health: 2
Fire: 0
Reactivity: 2
Special hazard: OX

Revised Date: 22 JANUARY 2015
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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