



## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** GALLIUM TRICHLORIDE

**SDS Number:** SDS-NP 001

**Revised Date:** 11 NOVEMBER 2019

**Synonyms:** **Industrial Use Only** - Gallium (III) Chloride, Gallium Chloride

**Chemical Formula:**  $\text{Cl}_3\text{Ga}$  (GaCl<sub>3</sub>)

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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: Danger

#### Hazard statement(s)

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

#### 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)

P310 Immediately call a POISON CENTER or doctor/physician

#### Classification:

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

Other hazards: reacts violently with water

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** Do not allow material to come in contact with the eyes. May cause irritation, burns or severe conjunctivitis.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. May produce respiratory tract irritation. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory system.

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

**Chronic:** Not established.

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

**Signs and Symptoms of Exposure:**

Cough, Shortness of breath, headache, nausea, vomiting

### 3.COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #/EINECS	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
Gallium Trichloride	100	13450-90-3/236-610-0	N.E.	N.E.	N.E.

N.E. = Not established

### 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.

**Ingestion:** Contact a Poison Control Center. 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 applicable      **Method:** Not applicable

**Auto-ignition Temperature:** Not established.

**Flammable Limits:** Limits not established

**Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. Dry chemical or media suitable for surrounding fire. Water is not recommended.

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

Hazardous decomposition products formed under fire conditions. – hydrogen chloride gas, gallium oxides

## 6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Under certain situations, as appropriate, wear a respirator and personal protective equipment (See Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Large spills require assistance by the fire department. Keep unnecessary personnel away from spill. Do not allow this material to enter any waterways. Avoid breathing dust/aerosol.

## 7. HANDLING AND STORAGE

**Handling Precautions:** Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing dusty material. Avoid contact with eyes, skin and clothing. Use in well-ventilated area. Avoid contact with moisture. Wear appropriate personal protective equipment (PPE), such but not limited to as eye protection/gloves/lab coat/face shield/respirator. Avoid formation of dusts and aerosols.

**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 considered hazardous as they contain product residue. Air sensitive material. Never allow product to get in contact with water during storage.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Exhaust ventilation is recommended to control airborne levels of dust/aerosols/fumes.

**Personal protection:**

**Eyes:** Chemical safety glasses/goggles and face shield for operations that may involve a splash hazard.

**Respirator:** A NIOSH approved or EU compliant CE marked air-purifying respirator with a fume particulate/acid chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.

**Skin:** Compatible chemical resistant rubber gloves such as nitrile should be worn. Lab coat and sleeve protectors or other protective clothing as required for protection. Use proper glove removal techniques to avoid skin contact with this product.

**Other:** Eyewash fountain in work area. Safety shower is also recommended. Avoid the use of contact lenses.

**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.

**Signs and Symptoms of Exposure:**

Cough, Shortness of breath, headache, nausea, vomiting

**Control of environmental exposure** - do not let product enter drains

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	White crystals/spheres/beads	<b>Boiling Point:</b>	201 C (394 F)
<b>Odor:</b>	Slight or no characteristic odor.	<b>Melting Point:</b>	78 C (172 F)
<b>Specific Gravity:</b>	2.47 at 25C (77F)	<b>pH:</b>	Corrosive
<b>Vapor Pressure:</b>	0.13 at 48 C	<b>Solubility in Water:</b>	Very soluble
		<b>Soluble also in:</b>	Benzene, CCL <sub>4</sub> , CS <sub>4</sub>
<b>Vapor Density:</b>	(air=1) Not established	<b>Formula Weight:</b>	176.08

**10. STABILITY AND REACTIVITY**

<b>General:</b>	Stable under storage conditions. Moisture sensitive.
<b>Conditions to Avoid:</b>	Contact with water. Reacts violently with water.
<b>Incompatible Materials:</b>	Avoid strong oxidizing agents and alcohols
<b>Hazardous Decomposition / Combustion:</b>	Emits toxic hydrogen chloride and gallium oxide fumes in a fire
<b>Hazardous Polymerization:</b>	Will not occur

**11. TOXICOLOGICAL INFORMATION**

<b>Carcinogenicity:</b>	<b>NTP:</b> No	
	<b>OSHA:</b> No	
	<b>IARC:</b> No	
<b>LC50:</b>	Not established.	
<b>LD50:</b>		
Toxicity: Subcutaneous (rat)	306 mg/kg	Intravenous (dog) 41 mg/kg
Intravenous (rat)	47 mg/kg	Subcutaneous (rabbit) 245 mg/kg
Parenteral (rat)	1408 mg/kg	Intravenous (rabbit) 43 mg/kg

**Other:** See NIOSH, RTECS LW9100000 for additional data.

**12. ECOLOGICAL INFORMATION**

No information is available at this time.

**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. Product may be considered as hazardous waste. Do not re-use containers for any other material then what it first contained.

**14. TRANSPORT INFORMATION**

Transport in accordance with applicable regulations and requirements.

Shipping:

**UN 3260, Corrosive Solid, Acidic, Inorganic, N.O.S., 8, II (gallium trichloride)**

Marine pollutant: No

IATA

UN 3260 Class: 8 Packing Group: II  
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (gallium trichloride)



North America Emergency Guide: 154

IMDG  
Category B storage  
EMS: F-A, S-B  
UN 3260 Class 8 Packing Group: II  
Corrosive solid, acidic, inorganic, n.o.s. (gallium trichloride)

Marine Pollutant: No

CERCLA EHS RQs- 500 lbs

## 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.).

Listed on the State of Massachusetts/New Jersey/Pennsylvania Right to Know Components.

SARA 313 Listing - 40 CFR 372.65 - None

Product is listed on the US TSCA Inventory. TSCA 12(b) – not applicable

CERCLA EHS RQs- 500 lbs

California Prop 65 – No

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

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 Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

Regulatory Information China:

GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products

GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)

Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.

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

Product is listed on the Korean Existing Chemical Inventory.

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

## 16. OTHER INFORMATION

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	3
	<b>Fire:</b>	0
	<b>Reactivity:</b>	2
	<b>Special:</b>	W

**Revised Date:** 11 NOVEMBER 2019

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

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