



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: INDIUM NITRATE SOLUTION (Not solid form)

SDS NUMBER: SDS-4092

REVISED DATE: 19 NOVEMBER 2018

PRODUCT : Industrial Use - $\text{InN}_3\text{O}_9 \cdot x \text{H}_2\text{O}$ Molecular weight: 300.83g/mol

MANUFACTURER:

In America:

The Indium Corporation of America®.

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CHEMTREC 24 hrs.

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In China:

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Suchun Industrial Square

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<http://www.indium.com>

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
 H302 Harmful if swallowed
 H312 Harmful in contact with skin
 H332 Harmful if inhaled

Precautionary statement(s)

P210 Keep away from heat
 P220 Keep/Store away from clothing/combustible materials
 P221 Take any precaution to avoid mixing with combustibles
 P233 Keep container tightly closed
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 Wash skin thoroughly after handling
 P270 Do not eat, drink or smoke when using this product
 P271 Use only outdoors or in well –ventilated area
 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 + 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)
 P363 Wash contaminated clothing before reuse
 P370 +P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
 P501 Dispose of contents/container by recycling if possible otherwise dispose of via approved handler.

Classification:

Oxidizing (Category 2)
 Acute toxicity, Oral (Category 4)
 Acute toxicity, Inhalation (Category 4)
 Acute toxicity, Dermal (Category 4)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Causes 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 or harm. Severe exposure could cause pulmonary damage.

Skin Contact: Causes severe skin irritation or harm.

Chronic: Indium may cause damage to respiratory system. Kidney and liver damage from injection of indium compounds has been reported based on limited animal testing.

Note: 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 impurities: listed metals] 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

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
INDIUM NITRATE SOLUTION	100	13770-61-1/237-393-5			
		(US)	0.1(as Indium)	0.1	-
		(EU)	-	0.1(as Indium)	0.3
		(Canada)	-	0.1(as Indium)	0.3
		(Singapore)	0.1(as indium)	-	-
		(Mexico)	-	0.1(as indium)	0.3
		(China)	-	0.1(as indium)	0.3

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 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. However, dust or powder may be combustible and 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: For Liquids: Isolate spill and remove with absorbent or neutralize. Place material in proper container. Avoid conditions which create fumes or fine dust. Wear personal protective equipment. Keep unauthorized people away.

7. HANDLING AND STORAGE

Handling: Use good housekeeping practices to prevent accumulation of dust (solid material).
Precautions: Keep dust away from sources of ignition. Liquid material should be stored away from base chemicals. Wear personal protective clothing when handling material.
Storage Precautions: Store product in a cool, dry, ventilated area away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is recommended.

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 respirator with an acid gas/particulate/fume cartridge may be necessary if contaminants are elevated.

Skin: Rubber or chemical resistant gloves.

Other: Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume 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:	Liquid	Boiling Point:	Decomposes
Odor:	nitric acid odor	Melting Point:	Not available
Specific Gravity:	Not established	pH:	<1
Vapor Pressure:	Not applicable.	Solubility in Water:	Soluble
Vapor Density:	(air=1) Not applicable.	Molecular Weight:	Not available

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: An oxidizer which may enhance fire.

Incompatible Materials: Strong reducing agents, strong acids.

Hazardous Decomposition / Combustion: Emits NO_x gases 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

LD50: No information available

Other: Chronic Toxicity: Overexposure to fumes may cause respiratory tract irritation.

Irritancy of Product:	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 data 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 international regulations and requirements.

UN 3218, Nitrates, Inorganic, Aqueous Solution, N.O.S., 5.1, PG III

North America Emergency Guide Book - 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.

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.



Warning: This product can expose you to chemicals including [Trace impurities: listed metals] 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

Ingredients are listed on the Canadian Domestic Substance List.

16. OTHER INFORMATION

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

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Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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