

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name	<b>Indium, Enriched Indium</b>
Chemical Formula	In
Molecular Weight	114.82 g/mol
CAS No.	7440-74-6
RTECS No.	NL1050000
Supplier Address*	ISOFLEX USA PO Box 472615 San Francisco CA 94147 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac/ +1 800-535-5053  *May include subsidiaries or affiliate companies/divisions
Email	<a href="mailto:iusa@isoflex.com">iusa@isoflex.com</a>
Website	<a href="http://www.isoflex.com">www.isoflex.com</a>
Preparation Information	ISOFLEX USA Product Safety +1 415-440-4433

**2. HAZARDOUS IDENTIFICATION**

**Emergency Overview**

Harmful if swallowed, in contact with skin or if inhaled  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation

**NFPA Ratings:** (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

**Health Hazard = 2      Flammability = 0      Reactivity = 0**



**HMIS Ratings:** (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

**Health Hazard = 2      Flammability = 0      Physical Hazard = 0**

<b>HEALTH HAZARD</b>	<b>2</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	

#### **Potential Health Effects**

<i>Potential Acute Health Effects</i>	Hazardous in case of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).
<i>Potential Chronic Health Effects</i>	Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.
<i>Carcinogenic Effects</i>	Not available
<i>Mutagenic Effects</i>	Not available
<i>Teratogenic Effects</i>	Not available
<i>Developmental Toxicity</i>	Proven. The substance is toxic to blood, kidneys, the reproductive system, liver, heart, upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target-organ damage.

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### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name:	Indium
CAS No.:	7440-74-6
Chemical Formula:	In
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### **4. FIRST AID MEASURES**

<i>Eye Contact</i>	No known effect on eye contact; rinse with water for a few minutes.
<i>Skin Contact</i>	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
<i>Serious Skin Contact</i>	Not available
<i>Inhalation</i>	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.
<i>Serious Inhalation</i>	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
<i>Ingestion</i>	Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
<i>Serious Ingestion</i>	Not available

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## 5. FIREFIGHTING MEASURES

<i>Flammability</i>	Flammable
<i>Auto-Ignition Temperature</i>	N/A
<i>Flash Point</i>	N/A
<i>Flammable Limits</i>	N/A
<i>Products of Combustion</i>	N/A
<i>Fire Hazards in Presence of Various Substances</i>	N/A

### Explosion Hazards in Presence of Various Substances

<i>Risks of Explosion of the Product in Presence of Mechanical Impact</i>	N/A
<i>Risks of Explosion of the Product in Presence of Static Discharge</i>	N/A
<i>Firefighting Media and Instructions</i>	Flammable solid
<i>Small Fire</i>	Use DRY chemical powder
<i>Large Fire</i>	Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
<i>Special Remarks on Fire Hazards</i>	N/A
<i>Special Remarks on Explosion Hazards</i>	N/A

### Firefighting

<i>Special Hazards</i>	Indium/indium oxides
<i>Advice for Firefighters</i>	Wear self-contained breathing apparatus for firefighting if necessary.

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## 6. ACCIDENTAL RELEASE MEASURES

<i>Personal Precautions</i>	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
<i>Environmental Precautions</i>	Do not let product enter drains.
<i>Methods for Cleaning Up</i>	Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Large Spill: Flammable solid. Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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## 7. HANDLING AND STORAGE

### Handling

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust.

### Storage

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Personal Protective Equipment

#### Eye

Safety glasses

#### Body

Lab coat

#### Hand

Gloves

#### Respiratory

Dust respirator. Be sure to use an approved/certified respirator or equivalent.

#### Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

#### Exposure Limits:

TWA

0.1 (mg/m<sup>3</sup>) from OSHA (PEL)

TWA

0.1 (mg/m<sup>3</sup>) from ACGIH (Consult local authorities for acceptable exposure limits)

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form

Solid

Color

N/A

Odor

Odorless

Taste

N/A

### Safety Data

Molecular Weight:

114.82 g/mol

pH (1% soln/water):

N/A

Boiling Point:

2000 °C (3632 °F)

Melting Point:

156.17 °C (313.1 °F)

Critical Temperature:

N/A

Specific Gravity:

7.31 (Water = 1)

Vapor Pressure:

N/A

Vapor Density:

N/A

Volatility:

N/A

Odor Threshold:

N/A

Water/Oil Dist. Coeff.: N/A

Ionicity (in Water):

N/A

Dispersion Properties: Is not dispersed in cold water, hot water

Solubility: Insoluble in cold water, hot water

N/A = not available

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**10. STABILITY AND REACTIVITY**

<i>Stability</i>	Stable
<i>Instability Temperature</i>	N/A
<i>Conditions of Instability</i>	N/A
<i>Incompatible Materials</i>	N/A
<i>Corrosivity</i>	Non-corrosive in presence of glass
<i>Special Remarks on Reactivity</i>	N/A
<i>Special Remarks on Corrosivity</i>	N/A
<i>Polymerization</i>	No.

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**11. TOXICOLOGICAL INFORMATION**

*Routes of Entry* Absorbed through skin, eye contact, inhalation, ingestion

**Toxicity to Animals**

<i>LD50</i>	N/A
<i>LC50</i>	N/A

**Chronic Effects on Humans**

*Developmental Toxicity* Proven. The substance is toxic to blood, kidneys, the reproductive system, liver, heart, upper respiratory tract, skin, eyes.

*Other Toxic Effects on Humans* Hazardous in case of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant).

*Special Remarks on Toxicity to Animals* N/A

*Special Remarks on Chronic Effects on Humans* N/A

*Special Remarks on Other Toxic Effects on Humans* N/A

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**12. ECOLOGICAL INFORMATION**

*Ecotoxicity* N/A

*BOD5 and COD* N/A

*Products of Biodegradation* Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.

*Toxicity of the Products of Biodegradation* The products of degradation are more toxic.

*Special Remarks on the Products of Biodegradation* N/A

*Toxicity* No data available

*Persistence and Degradability* No data available

*Bioaccumulative Potential* No data available

<i>Mobility in Soil</i>	No data available
<i>Results of PBT and vPvB Assessment</i>	PBT/vPvB assessment not available, as chemical safety assessment not required/not conducted
<i>Other Adverse Effects</i>	No data available

### 13. DISPOSAL CONSIDERATION

<i>Product</i>	Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations. Catalysts and expensive metals should be recovered for reuse or recycling.
<i>Contaminated Packaging</i>	Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### DOT Classification

<i>Class</i>	4.1: Flammable solid.
<i>Identification</i>	Metal Powder, Flammable, n.o.s.(Indium Powder)
<i>UN No.</i>	UN3089
<i>Packing Group</i>	III
<i>Special Provisions for Transport</i>	N/A

### 15. REGULATORY INFORMATION

<b>REACH Number</b>	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.
<b>SARA 302 Components</b>	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313 Components</b>	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
<b>SARA 311/312 Hazards</b>	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
<b>Massachusetts Right to Know Components</b>	Indium / CAS No. 7440-74-6 / Revision Date 1994-04-01
<b>Pennsylvania Right to Know Components</b>	Indium / CAS No. 7440-74-6 / Revision Date 1994-04-01
<b>New Jersey Right to Know Components</b>	Indium / CAS No. 7440-74-6 / Revision Date 1994-04-01
<b>California Prop. 65 Components</b>	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

<i>Prepared By</i>	ISOFLEX USA PO Box 472615 San Francisco CA 94147 United States
<i>Issuing Date</i>	February 9, 2015
<i>Revision Date</i>	May 10, 2024
<i>Revision Number</i>	3
<i>Revision Note</i>	Update Supplier Address

### ISOFLEX USA's Commonly Used Abbreviations and Acronyms\*

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
BOD5	Biochemical Oxygen Demand
CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
COD	Chemical Oxygen Demand
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EC50	Half Maximal Effective Concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)

NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)
RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RQ	Reportable Quantity
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
SNUR	Significant New Use Rule (TSCA)
TDG	Transportation of Dangerous Goods (Canada)
TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

\*One or more of the above-listed items may not appear in this document.

#### **General Disclaimer**

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