

## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

#### Product identifier:

Product name: Indium(III) oxide

Product code (SDS NO): 32050jis\_E1-1

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Carcinogenicity: Category 1B

Specific target organ toxicity – repeated exposure: Category 1(respiratory organs)

(Note) GHS classification without description: Not classified/Classification not possible

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

H320–Causes eye irritation

H350–May cause cancer

H372–Causes damage to organs through prolonged or repeated exposure

#### PRECAUTIONARY STATEMENT

##### Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

Use personal protective equipment as required.

Do not eat, drink or smoke when using this product.

##### Response

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

##### Storage

Store locked up.

##### Disposal

Dispose of contents/container in accordance with local/national regulation.

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### 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Substance

Ingredient name: Indium oxide

Content (%): 99.99 <

Chemical formula:  $\text{In}_2\text{O}_3$

Chemicals No, Japan: 1-750

CAS No.: 1312-43-2

MW: 277.63

ECNO: 215-193-9

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### 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Get medical attention/advice if you feel unwell.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

##### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

##### IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

##### IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

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### 5. Fire-fighting measures

#### Extinguishing media

##### Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

Unsuitable extinguishing media data is not available.

#### Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

#### Advice for firefighters

##### Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

##### Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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## 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

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## 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves, protective clothing or face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Any incompatibilities data is not available.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Storage

Conditions for safe storage

Store in a well-ventilated place. Keep container tightly closed.

Keep cool. Protect from sunlight.

Store locked up.

Container and packaging materials for safe handling data is not available.

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## 8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

Adopted value in JSOH is not available.

ACGIH(1990) TWA: 0.1 mg-In/m<sup>3</sup> (Pulm edema; pneumonitis; dental erosion; malaise)

OSHA-PEL value is not available.

NIOSH-REL value is not available.

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Powder

Color: Yellow

Odor data is not available.

Odor threshold data is not available.

pH data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Evaporation rate data is not available.

Melting point/Freezing point: >1500°C

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

Flammability (gases, liquids and solids): Non-ignitable

Flash point data is not available.

Auto-ignition temperature data is not available.

Critical temperature data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Vapor pressure data is not available.

Vapor density data is not available.

VOC data is not available.

Relative vapor density (Air=1) data is not available.

Relative density of the Vapor/air – mixture at 20°C (Air = 1) data is not available.

Density and/or relative density: 7.168(20°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Insoluble

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

No Particle characteristics data is not available.

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## 10. Stability and Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions data is not available.

Conditions to avoid

Heat.

Incompatible materials data is not available.

Hazardous decomposition products

Indium oxides

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## 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50 > 10000 mg/kg (PATTY 6th, 2012)

Labor standard law, Japan; Toxic

Indium oxide

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[GHS Cat. Japan, base data]

human : eyes, respiratory tract irritation (MOE risk assessment vol.11, 2013)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

[GHS Cat. Japan, base data]

cat.1B; JSOH 2A (JSOH, 2015 (hardly soluble inorganic In compounds) et al.)

JSOH-2A: Sufficient Evidence of Carcinogenicity for Humans

Reproductive toxicity data is not available.

STOT

STOT-single exposure data is not available.

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

respiratory apparatus (MOE risk assessment vol.11, 2013)

Aspiration hazard data is not available.

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## 12. Ecological Information

Ecotoxicity data is not available.

Persistence and degradability data is not available.

Bioaccumulative potential data is not available.

Mobility in soil data is not available.

Ozone depleting chemical data is not available.

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## 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

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**14. Transport Information**

Not applicable to UN No., UN CLASS

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

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**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

Environmental hazards

MARPOL Annex V – Prevention of pollution by garbage discharge

Carcinogenicity: cat.1, 1A, 1B

Indium oxide

Specific target organ toxicity – repeated exposure: cat.1

Indium oxide

US major regulations

Chemicals listed in TSCA Inventory

Indium oxide

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

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**16. Other information**

GHS classification and labelling

H320–Eye Irrit. 2B: H320 Causes eye irritation

H350–Carc. 1B: H350 May cause cancer

H372–STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39–18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table3–1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

JIS Z 7253 : 2019

JIS Z 7252 : 2019

2019 Recommendation on TLVs (JISOH)

Supplier's data/information

Chemicals safety data management system "GHS Assistant" (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform (NITE-CHRIP)

[https://www.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2013 Revised Edition (Aug. 2013, METI)

**General Disclaimer**

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2018).