



**INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®
INDIUM CORPORATION (SUZHOU)®**

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: BRAZE ALLOYS: GOLD WITH PALLADIUM AND TITANIUM

SDS Number: SDS-6028

Revised Date: 24 MARCH 2015

Product Use: INDUSTRIAL USE – Metal alloy gold with palladium and titanium metal.

MANUFACTURER:

In America:

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

EMERGENCY PHONE:

CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887

In Europe:

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

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

In Asia:

Indium Corporation of America
Asia-Pacific Operations-Singapore
29 Kian Teck Avenue
Singapore 628908
Information: +65 6268-8678

2. HAZARDS IDENTIFICATION**PRIMARY ROUTES OF ENTRY:**

*Eye *Inhalation *Skin *Ingestion

CARCINOGEN LISTED IN:

NTP IARC OSHA *Not Listed

GHS:



Signal Word: Warning

Hazard Statement(s)

H317 May cause an allergic skin reaction

Precautionary Statement(s)

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)

Classification

Skin sensitizer- Category 1B (palladium)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Severe damage may result from hot molten metal being splashed into the eyes. Wear proper protection when working with molten metal. May cause irritation.

Ingestion: May cause irritation.

Inhalation: Inhalation of vapors may cause irritation.

Skin Contact: Contact may cause irritation/rash. May cause an allergic skin reaction.

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 lead). This is applicable within the State of California. This statement is not used outside of California.

NOTE: The Indium Corporation does not recommend, manufacturer, market or endorse any of it's products for human consumption.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Components | % wt | CAS Registry #/EINECS# | PEL mg/m ³ | TLV-TWA mg/m ³ | TLV-STEL mg/m ³ | |
|------------------|-------|------------------------|--------------------------|------------------------------|-------------------------------|-----|
| GOLD | 93.75 | 7440-57-5/231-165-9 | | | | |
| | | | (US) | 0.01 | 0.1 | - |
| | | | (EU) | - | 0.1 | - |
| | | | (Canada) | - | 0.1 | 0.3 |
| | | | (Mexico) | 0.1 | - | - |
| | | | (Singapore) | 0.1 | - | - |
| PALLADIUM | 5 | 7440-05-3/231-115-6 | N.E. | N.E. | N.E. | |
| TITANIUM | 1.25 | 7440-32-6 | 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 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. Massive metal is not flammable. Dust may be hazardous. | | |
| Extinguishing Media: | Use extinguishers appropriate for the surrounding fire conditions. Do Not Direct Water at or onto the heated metal. | | |
| Special Fire Fighting Procedures: | Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing. | | |

Thermal decomposition can lead to release of irritating gases and vapors.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Solid metal should be clean up without generating dust. Do not sweep. Dust may be hazardous.

Dispose of following all Federal, State and Local regulations. Metal may have reclaim value. Wear personal protective equipment and avoid breathing any dust or fume. Do not discharge to any drains.

7. HANDLING AND STORAGE

Handling Precautions:

User should review their own workplace situations and uses and determine the best guidelines for handling. PPE should be assessed based on the particular use or uses. Melting or grinding of mixed alloys should be reviewed. Ventilation is recommended when there is a potential for work place exposures to metal fume or particulate. Permissible exposure levels in high fume or particulate tasks should be assessed so that they are not exceeded. Ensure engineering controls are used to protect the worker.

Safety glasses or goggles shall be worn. A face shield should be added when handling metal where there is a potential for splash hazards. Additional personal protective equipment should be used when handling molten metals: face shield, hot gloves for handling hot metals, sleeve protector for splash hazards if handling large volumes where there is a potential for splash and burns from hot metal. Additional protection includes apron.

Keep unauthorized personnel away when handling molten metals.

Exhaust ventilation should be provided for any metal fume when heating is being conducted.

Store materials in the proper container. Hot metals should be placed into a compatible container.

Avoid dust generation. Dust may be hazardous.

Storage Precautions: Store product in a cool, dry area away from incompatible materials (metals and moisture). Close container when not in use, where applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Exhaust ventilation is recommended to control any air contaminants and keep exposures as low as possible.

Personal protection:

Eyes: Chemical safety glasses/goggles and face shield with molten metal.

Respirator: An authority approved or compliant marked air-purifying respirator with a fume/dust chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.

Skin: Gloves-leather or impervious (vinyl) type.
Heat resistant gloves if handling hot metal. Safety type boots. Personal protective equipment is recommended when working with molten metal to avoid burns.

Other: Lab coat, safety shower and eyewash fountain in work area. Avoid the use of contact lenses.

Work/Hygienic Practices: Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential.

Practices: Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water

immediately upon leaving the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|--------------------------|--------------------------|-----------------------------|--------------------------|
| Appearance: | Solid Metal Form | | |
| Boiling Point: | No information available | | |
| Odor: | Odorless | Melting Point: | No information available |
| Vapor Pressure: | Not available | Solubility in Water: | Insoluble |
| Vapor Density: | Not available | Molecular Weight: | Not available |
| Specific Gravity: | 7.83 | | |

10. STABILITY AND REACTIVITY

| | |
|----------------------------------------------|---------------------------------------|
| General: | Stable. |
| Conditions to Avoid: | No information available |
| Incompatible Materials: | halogens, hydrogen peroxide, ammonia. |
| Hazardous Decomposition / Combustion: | oxides |
| Hazardous Polymerization: | Will not occur. |

11. TOXICOLOGICAL INFORMATION

| | |
|-----------------------------------------------------------------|----|
| Carcinogenicity: National Toxicity Program (NTP): | No |
| Occupational Safety & Health Administration (OSHA): | No |
| U.N. International Agency for Research on Cancer (IARC): | No |

Product mixture not tested.

12. ECOLOGICAL INFORMATION

Product not tested.

13. DISPOSAL CONSIDERATION

| | |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste Disposal Method: | Scrap metal alloy usually has value. Contact a commercial reclaimer for recycling. Otherwise, dispose of in accordance with all Federal, State and Local environmental regulations. |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.
Non-hazardous under shipping.

UN- none

Non – hazardous (ground/IATA/IMDG)

Marine Pollutant: 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).

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

Canadian WHMIS: none

This product has been classified in accordance with the guidelines set by the Dept. of Industrial Health of the Republic of Singapore.

California PROP 65 (Safe Drinking Water Standard): WARNING: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (trace lead). Applicable within the state.

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory, Philippines Inventory, Japan Existing and New Chemical Substances, China Inventory of Existing Chemical Substances, Canadian Domestic Substances List

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Risk Phrases:

R43 May cause sensitization by skin contact (dust)

Safety Phrases:

S20/21 When using do not eat, drink or smoke

S22 Do not breathe dust

S23 Do not breathe fumes

S24/25 Avoid contact with skin and eyes

S27 Take off immediately all contaminated clothing

S28 After contact with skin wash immediately with plenty of soap and water

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label

16. OTHER INFORMATION

| | | |
|----------------------------|-------------------------|---|
| HMIS Hazard Rating: | Health: | 0 |
| | Fire: | 0 |
| | Physical Hazard: | 0 |

Revised Date: 24 MARCH 2015

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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