

# Material Safety Data Sheet

THE ARGEN CORPORATION

5855 Oberlin Drive San Diego CA 92121-4718

## SECTION 1 - SUBSTANCE IDENTIFICATION

ALLOY NAME: ARGENCO BIO 1

DESCRIPTION: Color: YELLOW Type: 3/4

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

METAL	%	SYMBOL	CAS NO	ACGIH 8 HR TLV	OSHA 8 HR PEL
GOLD	71.9	Au	7440-57-5	Not established	Not established
PLATINUM	4.1	Pt	7440-06-4	No data	No data
SILVER	10.9	Ag	7440-22-4	0.01 mg/m3	0.1 mg/m3
IRIDIUM	<1	Ir	7439-88-5	No data	No data
COPPER	11.45	Cu	7440-50-8	0.1 mg/m3 (Fume) 1 mg/m3 (Dust)	0.2 mg/m3 (Fume) 1 mg/m3 (Dust)
ZINC	<1	Zn	7440-66-6	5mg/m3	No data
TIN	<1	Sn	7440-31-5	2 mg/m3	2 mg/m3

Note: % values are in weight percent and reflect nominal composition.

Note: 'x' denotes a content of less than one percent

## SECTION 3- HAZARDS IDENTIFICATION

EYES: Contact with eyes may cause severe irritation and possible eye burns.

SKIN: May cause severe irritation and possible burns.

INGESTION: May cause gastrointestinal irritation with nausea, vomiting, and diarrhea.

INHALATION: May cause irritation and burns to the respiratory tract.

NOTE: Exposure levels for elements in this alloy are listed in SECTION 2. The following health data is for specific elements:

SILVER Absorption of silver compounds by ingestion, inhalation or through broken skin can cause argyria, a permanent bluish-grey discoloration of the skin, conjunctiva and mucous membranes. Generalized argyria develops after 2 to 25 years of exposure. There are no systematic effects or symptoms and no physical disability. Silver is considered an experimental equivocal tumorigenic agent by RTECS criteria.

## SECTION 4 - FIRST AID MEASURES

EYE CONTACT : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.

SKIN CONTACT: Scrub skin thoroughly with soap and water.

**INGESTION:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Induce vomiting.  
\*\*Never give anything by mouth to an unconscious person. Get medical aid.

**INHALATION:** Remove affected person to fresh air and assist with additional oxygen if necessary.  
Get first aid if other symptoms appear.

---

### SECTION 5 - FIREFIGHTING MEASURE

---

This material is fire and explosion resistant. Heating Beyond the melting range may generate fumes which are not flammable.

---

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

---

**GENERAL INFORMATION:** Use proper personal protective equipment as described in section 8.

---

### SECTION 7 - HANDLING AND STORAGE

---

Avoid inhalation of fumes while melting and dust while grinding. Wash hands thoroughly before eating or smoking to avoid ingestion.

---

### SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTIONS

---

**RESPIRATORY:** Provide general ventilation and local exhaust to keep levels below the TLV stated in SECTION 2.  
Wear a NIOSH approved respirator for dust exceeding the TLVs.

**HAND:** Latex gloves are recommended while grinding, heat resistant gloves should be worn while casting and handling hot metals or molds.

**EYE PROTECTION:** Wear eye protection suitable to each individual operation.

**OTHER:** Wear apron, lab coat or other protective clothing.

---

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

---

**Appearance:** YELLOW

**Odor:** Not Applicable

**pH:** Not Applicable

**Boiling Point:** Not Applicable

**Melting Range:** 870-920 °C

**Flash Point:** Not Applicable

**Flammability:** Not Applicable

**Autoflammability:** Not Applicable

**Explosive Properties:** Not Applicable

**Oxidizing Properties:** Not Applicable

**Vapor Pressure:** Not Applicable

**Solubility(Water/Fat):** Insoluble

---

### SECTION 10 - STABILITY AND REACTIVITY

---

At ordinary and high (below the melting range) temperatures, the material oxidizes but is stable. At very high temperatures the alloy produces fumes.

---

### SECTION 11 - TOXICOLOGICAL INFORMATION

---

No specific instructions.

---

### SECTION 12 - ECOLOGICAL INFORMATION

---

This is an environmentally friendly material. With proper dust collecting equipment, 100% of this alloy can be recycled.

---

### SECTION 13 - DISPOSAL CONSIDERATIONS

---

Whenever possible, recover dust because it has economic value.

---

#### SECTION 14 - TRANSPORT INFORMATION

---

No specific instructions.

---

#### SECTION 15 - REGULATORY INFORMATION

---

No specific instructions.

---

#### SECTION 16 - OTHER INFORMATION

---

The information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof. However, THE ARGEN CORPORATION makes no representations as to the completeness of accuracy thereof and information is supplied upon the condition that the persons receiving the above material will make their own determination as to its suitability for their purposes prior to use. In no event will "THE ARGEN CORPORATION" be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers.

Revision Date: 5/30/2011