

# SAFETY DATA SHEET

## SECTION 1 : IDENTIFICATION

### Product identifier used on the label:

**Product Name:** BRONZE ALLOYS XP55, C61550, C69300, C66540  
**SDS Manufacturer Number:** 226999

### Other means of identification:

### Recommended use of the chemical and restrictions on use:

### Chemical manufacturer address and telephone number:

**Manufacturer Name:** PMX Industries, Inc.  
**Address:** 5300 Willow Creek Drive SW  
Cedar Rapids, Iowa 52404-4303  
USA  
**General Phone Number:** 319-368-7700  
**General Fax Number:** 319-368-7701

### Emergency phone number:

**Emergency Phone Number:** 319-368-7700

## SECTION 2 : HAZARD(S) IDENTIFICATION

### Classification of the chemical in accordance with CFR 1910.1200(d)(f):

**Signal Word:** Not applicable.  
**GHS Class:** Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200..

### Hazards not otherwise classified that have been identified during the classification process:

**Emergency Overview:** Copper alloy products in the natural state do not present a hazard for emergency response personnel.  
**Route of Exposure:** Inhalation, Eye Contact, Skin Contact  
**Potential Health Effects:** Copper alloy products in the natural state do not present an inhalation, ingestion, or contact hazard. However, operations such as burning, welding, sawing, brazing, or grinding may release fumes and/or dusts which may present health hazards if occupational exposure limits are exceeded.  
**Eye:** Short-term exposure to fumes/dust may produce irritation.  
**Skin:** Repeated or prolonged exposure to copper dusts or mists may cause irritant or allergic contact dermatitis.  
**Inhalation:** Short-term exposure to fumes/dust may produce irritation of the respiratory system. Exposure to high concentrations of copper oxide fumes may cause metal fume fever.  
**Ingestion:** Ingestion of large doses of nickel compounds (1-3 mg/kg) has been shown to cause intestinal disorders, convulsions, and asphyxia.  
**Carcinogenicity:** See Toxicological Information (Section #11)  
**Potential Environmental Effects:** POTENTIAL ENVIRONMENTAL EFFECTS: None known. Product has not been tested for environmental properties.  
**Signs/Symptoms:** Metal fume fever - metallic taste in mouth, dryness, and irritation of the throat, and influenza-like symptoms. The effects may be delayed.  
Nickel overexposure - effects on nasal sinuses, including inflammation and ulceration.  
**Target Organs:** Upper respiratory tract, eyes, skin  
**Aggravation of Pre-Existing Conditions:** Exposure to fumes or dust may aggravate existing respiratory disease or dermatitis.

## SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

### Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Aluminum	7429-90-5	4.5 - 6.5% by Mole	231-072-3
Nickel	7440-02-0	2 - 2.25% by Mole	231-111-4
Copper	7440-50-8	88.4 - 93% by Mole	231-159-6

## SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

**Eye Contact:** Flush with water for at least 15 minutes.  
**Skin Contact:** Wash with soap and water.  
**Inhalation:** If exposed to excessive levels of metal fumes, remove to fresh air. Seek medical attention.

**SECTION 5 : FIRE FIGHTING MEASURES**

Suitable and unsuitable extinguishing media:

**Suitable Extinguishing Media:** Use extinguishing media appropriate to the surrounding material.  
**Fire Fighting Instructions:** Copper alloy products in the solid state present no fire or explosion hazard, but may react with strong acids, bases, or oxidizing agents.

**SECTION 6 : ACCIDENTAL RELEASE MEASURES**

Methods and materials for containment and cleaning up:

**Spill Cleanup Measures:** STEPS TO BE TAKEN IN THE EVENT OF SPILLS, LEAKS, OR RELEASES: Not applicable

**SECTION 7 : HANDLING and STORAGE**

Precautions for safe handling:

**Handling:** In welding, precautions should be taken for airborne contaminants that may originate from components of the welding rod.

**SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION**

EXPOSURE GUIDELINES:

**Aluminum :**

**Guideline ACGIH:** TLV-TWA: 1 mg/m<sup>3</sup> Respirable fraction (R)  
TLV-TWA: 1 mg/m<sup>3</sup> Respirable fraction (R)  
TLV-TWA: 1 mg/m<sup>3</sup> (R)  
**Guideline OSHA:** PEL-TWA: 15 mg/m<sup>3</sup> Total particulate/dust (T)  
PEL-TWA: 5 mg/m<sup>3</sup> Respirable fraction (R)

**Nickel :**

**Guideline ACGIH:** TLV-TWA: 1.5 mg/m<sup>3</sup> Inhalable fraction (I)  
**Guideline OSHA:** PEL-TWA: 1 mg/m<sup>3</sup>  
PEL-TWA: 1 mg/m<sup>3</sup>  
PEL-TWA: 1 mg/m<sup>3</sup>

**Copper :**

**Guideline ACGIH:** TLV-TWA: 1 mg/m<sup>3</sup>  
TLV-TWA: 0.2 mg/m<sup>3</sup>  
**Guideline OSHA:** PEL-TWA: 1 mg/m<sup>3</sup>  
PEL-TWA: 0.1 mg/m<sup>3</sup>

Appropriate engineering controls:

**Engineering Controls:** Local exhaust ventilation should be utilized when welding, burning, sawing, brazing, grinding, or machining when exposure exceeds occupational exposure limits.

Individual protection measures:

**Eye/Face Protection:** Safety glasses or goggles should be utilized as required by exposure. Other protective equipment should be utilized as required by welding standards.

**Skin Protection Description:** Wear appropriate personal protective clothing to prevent skin contact with copper dusts and mists.

**Respiratory Protection:** NIOSH-approved dust or fume respirator should be used to avoid excessive inhalation of particulates when exposure exceeds occupational exposure limits.

**Other Protective:** OTHER PREVENTIVE MEASURES: Do not eat, drink, or smoke during work. Wash hands before eating or smoking.

**SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES**

PHYSICAL AND CHEMICAL PROPERTIES:

**Physical State:** Solid  
**APPEARANCE:** Lustrous metal  
**Color:** Salmon-colored  
**Odor:** None  
**Melting Point:** Not Available  
**Density:** LB/IN<sup>3</sup>: Not available  
**Specific Gravity:** Not Available

Vapor Density:	(Air = 1): Not applicable
Vapor Pressure:	Not Applicable
Percent Volatile:	Not Applicable
Evaporation Rate:	Not Applicable
pH:	Not Applicable
Flash Point:	Not Applicable
Lower Flammable/Explosive Limit:	(%): None
Upper Flammable/Explosive Limit:	(%): None
Auto Ignition Temperature:	Not Applicable

## SECTION 10 : STABILITY and REACTIVITY

### Reactivity:

Reactivity: Possibility of Hazardous Reactions: Will not occur

### Chemical Stability:

Chemical Stability: Stable

### Conditions To Avoid:

Conditions to Avoid: None

### Incompatible Materials:

Incompatible Materials: Mercury, ammonia, acetylene acids. Contact with strong acids, bases, or oxidizing agents

### Hazardous Decomposition Products:

Special Decomposition Products: Metallic dust or fumes may be produced during welding, burning, grinding, and machining.

## SECTION 11 : TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION:

#### Nickel:

Acute Toxicity: LD50: 250 mg/kg (rodent, intraperitoneal)

#### Copper:

Acute Toxicity: LD50: 0.07 mg/kg (mouse, intraperitoneal)

#### Aluminum :

ACGIH: No

IARC: No

NTP: No

#### Nickel:

ACGIH: No

IARC: Yes

NTP: Yes

#### Copper:

ACGIH: No

IARC: No

NTP: No

Chronic Effects: Chronic overexposure to aluminum-containing dusts may cause fibrosis of the lungs. Repeated or prolonged overexposure to copper fume may cause the skin and hair to change color. Hypersensitivity to nickel is common and may cause allergic contact dermatitis, pulmonary asthma, and conjunctivitis.

#### Aluminum :

Inhalation: TClO: 4 mg/m<sup>3</sup> /1 year (human, inhalation-respiratory and metabolic effects)

#### Copper:

Ingestion: TDLo: 120 µg/kg (human, oral-gastrointestinal effects)

## SECTION 12 : ECOLOGICAL INFORMATION

### Ecotoxicity:

Ecotoxicity: Not Applicable

## SECTION 13 : DISPOSAL CONSIDERATIONS

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Description of waste:

Waste Disposal: According to local, state, and federal regulations.

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**SECTION 14 : TRANSPORT INFORMATION**

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DOT Shipping Name: Not restricted as a dangerous good.

DOT UN Number: Not restricted as a dangerous good.

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**SECTION 15 : REGULATORY INFORMATION**

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Safety, health and environmental regulations specific for the product:

**Aluminum :**

TSCA Inventory Status: Listed

Section 313: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.

Canada DSL: Listed

EC Number: 231-072-3

**Nickel :**

TSCA Inventory Status: Listed

Section 313: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.

California PROP 65: Listed: cancer.

Canada DSL: Listed

EC Number: 231-111-4

**Copper :**

TSCA Inventory Status: Listed

Section 313: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.

Canada DSL: Listed

EC Number: 231-159-6

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**SECTION 16 : ADDITIONAL INFORMATION**

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HMIS Ratings:

SDS Creation Date: December 15, 2004

SDS Revision Date: September 09, 2015

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