

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER	5N45 – Copper alloy
1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST	Alloy for goldsmith and precious jewelry
1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET	Pandora Alloys srl Via Galvani, 14 20094 Corsico (MI) Italia ☎ +39 02 45 86 40 35 📠 +39 02 45 86 98 40 ✉ info@pandoralloys.com 🌐 www.pandoralloys.com
1.4 EMERGENCY TELEPHONE NUMBER	Centro antiveleni c/o Niguarda Hospital P.za Ospedale Maggiore, 3 Milano – Italy ☎ +39 02 66 10 10 29 (24h)

## 2. HAZARDS IDENTIFICATION

2.1 SUBSTANCE CLASSIFICATION FURTHER HAZARDS	None to report.
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## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Cu, Ag, Zn - NOT DANGEROUS

## 4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES AFTER SMOKE INHALATION	It's good practice melting under extraction hoods or in closed casting machines, in case of fumes inhalation ventilate the room. In case of illness seek medical advice.
AFTER CONTACT WITH SKIN	No danger reported from normal use. Seek medical advice in presence of known sensitivity. In case of contact with molten metal, evaluate the extent of the burn and seek medical attention.
AFTER CONTACT WITH EYES	In event of irritation from fumes oxide, rinse with water. Consult your doctor if you develop conjunctivitis.
AFTER INGESTION	No risks reported.
4.2 MAIN SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	Vapor / fumes / dust: coughing, sneezing or lacrimation. In case of repeated or prolonged exposure, possible gastrointestinal disturbances, breathing difficulty, hypotension, cramps, and fever. Symptoms can occur with a certain delay.
4.3 INDICATION OF THE POSSIBLE NEED OF IMMEDIATE MEDICAL ADVICE OR SPECIAL TREATMENTS	Follow the procedures of safety agreed in your company

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## 5. EXTINGUISHING METHODS

- 5.1 Extinguishing media  
 Recommended extinguisher                      None in particular  
 Forbidden extinguisher                          Do not use water on molten metals
- 5.2 Special dangers due to the substance or to the mix  
 None in particular. Molten alloy might release smokes and vapor made up of oxides.
- 5.3 Recommendations to the employees in charge of fire extinction  
 Use adequate protections in case of smokes.  
 Follow the procedures of extinguishing agreed in your company.

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## 6. MEASURES IN CASE OF ACCIDENTAL RELEASE

- 6.1 Personal precautions, protection devices and procedures in case of emergency  
 Inert material. Use individual protection devices in case of certain sensibility to the mix. Use protection devices in case of exposition to vapors and smokes. During working time, follow the safety procedures agreed in your company.
- 6.2 Environmental precautions  
 Avoid release in the environment
- 6.3 Methods and materials for containment and collection  
 Collect material using devices suitable to re-use the material itself and/or its recovery by the producer.
- 6.4 reference to other sections  
 See sections 8 e 13

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## 7. HANDLING AND STORAGE

- 7.1 Precautions for a safe handling  
 Alloys can be handled without any particular precaution. During casting, melting, mechanical works, annealing and welding, provide for ventilation. Do not breathe dust, vapors and smokes.
- 7.2 Conditions for a safe storage, including possible incompatibilities.  
 Alloys can be stored without any particular precaution. For a better use, it is suitable a covered and dry place for storage.
- 7.3 Final specific uses  
 Copper alloy to be molten with pure gold.

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## 8. EXPOSITION CONTROL/PERSONAL PROTECTION

- 8.1 Control parameters  
 Limit values for zinc oxide TLV-TWA - smokes: 5 mg/m<sup>3</sup>, dusts: 10 mg/m<sup>3</sup>
- 8.2 Controls of exposition
- |                        |  |
|------------------------|--|
| Respiratory protection | Workplace should be ventilated, in case of need use protective masks and aspiration while casting. If aspiration devices are not available, use a ventilation device suitable for casting process. |
| Hands protection       | Use gloves suitable for casting.   |
| Eyes protection        | Use protective glasses while casting.  |
| Skin protection        | Use protective clothes and gloves  |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information about the basic physical and chemical properties	
Aspect: alloy in drops	Odor: odorless
Olfactory threshold: n.a.	pH: n.a.
Flash temperature: n.a.	Boiling temperature: not detected
Flash: not flammable	Evaporation rate: n.a.
Vapor pressure: n.a.	Explosiveness higher/lower limits: n.a.
Melting temperature: ~ 900 °C	Solubility: insoluble in water
Relative density: ~ 9 g/cm <sup>3</sup>	Vapor density: n.a.
Distribution coefficient: n.a.	Ignition temperature: n.a.
Decomposition temperature: n.a.	Viscosity: n.a.
Explosive properties: n.a.	Oxidizing properties: n.a.
9.2 Other information	
	None

## 10. STABILITY AND REACTIVITY

10.1 Reactivity	
High reactivity in presence of acids, oxidizing agents and caustic products	
10.2 Chemical stability	
Stable product	
10.3 Possible dangerous reactions	
Possible development of hydrogen and nitrogen tetroxide in presence of strong oxidizing mineral acids	
10.4 Conditions to avoid	
Avoid contact between alloy drops and acids, oxidizing agents or caustic products. Avoid melting temperature higher than the range indicated in the related tech chart.	
10.5 Incompatible materials	
Oxidizing agents, acids and caustic products	
10.6 Dangerous products due to decomposition	
None	

## 11. TOXICOLOGICAL INFORMATION

11.1 information about toxicological effects	
Acute toxicity	n.a.
Irritation	n.a.
Corrosivity	n.a.
Sensitization	n.a.
Toxicity with repeated dose	n.a.
Cancer-causing	n.a.
Mutagenicity	n.a.
Toxic for reproduction	n.a.

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity	n.a.
12.2 Persistence and degradability	n.a.
12.3 Bioaccumulative potential	n.a.
12.4 Mobility on soil	n.a.
12.5 Results on PBT and VPVB value	n.a.
12.6 Other negative effects	n.a.

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### 13. DISPOSAL CONSIDERATION

13.1 Methods of waste treatment                      Reuse if possible.  
    Follow the procedures and laws of your Country.

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### 14. INFORMATION ON TRANSPORT

14.1 UN number    n.a.  
 14.2 UN shipping rule                                    n.a.  
 14.3 Class of danger referred to transport    n.a.  
 14.4 Packing group                                        n.a.  
 14.5 Danger for environment                        n.a.  
 14.6 Special precautions for users                n.a.  
 14.7 Collect transport according to  
       Marpol 73/78 and IBC code                    n.a.

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### 15. INFORMATION ON REGULATIONS

15.1 Rules and laws on health, security and environment, specific for the mix  
       This chart follows the directions of CE Rule 1907/2006

15.2 Chemical safety value                            no

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### 16. OTHER INFORMATION

This chart has been written as per our knowledge at the present date. The user is asked to check if information are suitable and complete referred to the use of the alloy. Information on this chart are a description of characteristics of this product about its safety; this chart is not a guarantee of properties of this product.

This chart substitutes every previous communication.