

# FurseWELD®

## Exothermic welding powder (main)



### 1. Description of substance / preparation and company

For forming exothermic copper to copper and copper to steel joints.

#### Trade Name

FurseWELD Exothermic Welding Powder – 15P10, 25P10, 32P10, 45P10, 65P10, 90P10, 115P10, 150P10, 200P10, 250P10, 15RTB, 25RTB, 32RTB, 45RTB, 65RTB, 90RTB, 115RTB, 150RTB, 200RTB, 250RTB.

#### Manufacturer / Supplier

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#### 24 Hour Emergency Telephone No:

CHEMTREC 001 (703) 527-3887



### 2. Composition / specification of components

**Chemical Name:** Thermit Welding Powder.

CAS No. Index	Name	% by Weight
7429-90-5 (Aluminium)	Aluminium/Copper Alloy	Not > 17%
7440-50-8 (Copper)		
1317-39-1	Copper Oxide	Not > 80%
12775-68-7	Calcium Silicon	Not > 6%
7440-50-8	Copper	Not > 10%

### 3. Hazard data

The preparation is not classified as dangerous according to directive 1999/45//45/EC and its amendments.

#### Hazard Classification:

Weld Metal – Classification 4.1.

#### Routes of entry:

The primary route of entry into the human system is by means of inhalation via mouth or nose.

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### **Hazard Description:**

Exothermic reaction that produces molten metal with a temperature in excess of 1375°C. Can cause heat burns.

### **Effects & symptoms**

#### **Skin:**

Burns from heat given off during the reaction or from the resultant by-product, or moulds. Long term exposure to copper dust may result in allergic dermatitis.

#### **Eyes:**

Temporary blindness from the intense light generated from the exothermic reaction. Irritation to the eyes resulting from the dust and fumes during the exothermic reaction.

### **Target organs:**

Lungs, cardiovascular system, the upper respiratory tract, skin, eyes (Eye lens or corneas).

### **Upper respiratory tract:**

The inhalation of freshly formed oxide fumes and dust in high concentrations could result in influenza type symptoms. Repeated or prolonged inhalation may result in ulcerations and perforation of the nasal septum.

### **Aggravating conditions:**

Repeated exposure to highly toxic material may produce a general deterioration of health in one or more of the human organs.

## 4. First aid procedure

### **General Advice:**

Remove from exposed area, lie down, seek medical advice.

### **After Inhalation:**

If inhaled, move subject to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek immediate medical attention.

### **After Ingestion:**

DO NOT induce vomiting unless directed to do so by medical staff. If a large quantity of substance is swallowed, seek immediate medical attention. Loosen all tight clothing such as a collar, tie, belt or waistband.

### **After Skin Contact:**

Standard treatment for burns in event of contact with molten metal, slag or hot equipment. Treat with plenty of cold water. Consult a doctor if required.

### **After Eye Contact:**

Rinse thoroughly with plenty of water for at least 15 minutes. Keep eyes wide open whilst rinsing. Consult a doctor if required.

### **Notes to Physician:**

No additional remarks

### **Protection to first aiders:**

No additional remarks

## 5. Fire fighting procedure

### **Suitable Extinguishing Media:**

Dry sand or copious amounts of water, in a fine spray.

### **Special protective equipment for fire fighters**

In case of fire wear full protective flameproof clothing.

### **Specific Hazards:**

Self propagating high temperature reaction will occur if heated above ignition point (Flash point – 950°C). This will result in molten metal, slag, and dense, dusty smoke, volatile combustible decomposition of cardboard and plastic packaging containers.

### **Specific Methods:**

Cool containers/pallets with water spray, always apply at a safe distance from the fire. DO NOT use hand buckets or hand held extinguisher.

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### 6. Procedure in case of unintended liberation

#### Methods for Cleaning Up:

All spilled material may be wetted down and swept up for disposal using a soft natural fibre brush and non sparking conductive scoops. (Wetting down the spillage prevents dust particles dispersing in air).

#### Waste Disposal Methods:

Dispose of in accordance with local regulations.

#### Environmental Precautions:

If powder should enter a storm water drain or sewer system, it is non- toxic and non- polluting.

#### Personal precautions

##### Eyes:

Splash goggles

##### Respiratory system:

Dust protection mask

##### Skin & body:

Overalls button to the neck & wrist

### 7. Handling and storage

#### Technical Measures & Precautions:

Use only in areas provided with appropriate exhaust ventilation.

#### Handling and Open Storage Conditions:

Store in a cool dry area, away from sources of ignition i.e. electrical outlet sockets, open flames etc. Keep away from excessive heat above 800°C.

#### Safe Handling Advice (when being used):

Wear personal protective equipment such as is used by arc welders.

#### Packaging:

Packed in plastic cartridges, each weighting between 15 and 250 grams.

There are 10 to 20 cartridges per plastic box.

There are between 20 and 30 plastic boxes per cardboard carton.

Weight for each box/package:

Sea Freight 25kgs

Air Freight 15kgs

### 8. Exposition limits and personal protective equipment

#### Engineering measures:

Treat as for normal arc welding i.e. In confined areas it may be necessary to extract the dust and fumes as per normal welding techniques, by the use of extraction fans or approved respirators.

#### Eye Protection:

Face shield/safety glasses (Shade 3 tinted).

#### Respiratory Protection:

Not required.

#### Skin and Body Protection:

PPE used in Arc welding processes i.e Welders apron, overalls buttoned to neck & wrist, work boots.

#### Hand Protection:

Heat resistant gloves (Welders gloves).

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### 9. Physical and chemical properties

**Form:**

Granules

**Colour:**

Grey

**Odour:**

None

**pH:**

Neutral

**Specific Gravity:**

2.5 Nominal

**Ignition:**

950°C

**Maximum Temperature:**

1450°C

**Solubility:**

Non Soluble

### 10. Stability and reactivity

**Stability:**

Stable at normal temperature

**Conditions to Avoid:**

Above 950°C ignition is possible

**Hazardous Decomposition Products:**

None

### 11. Toxicological data

**Toxicity:**

Non Toxic

### 12. Ecological data

**General:**

If powder has entered a water course or sewer it is non-toxic.

### 13. Disposal data

**Waste from residues and unused products:**

Can be land filled when in compliance with local regulations.

**Contaminated packaging:**

Empty containers can be land filled when in compliance with local regulations.

### 14. Transportation data

UN 3089 Metal powder, Flammable, N.O.S. 4.1; Packing Group II

**Flammable Solid Inorganic NOS****Hazard Class:**

4.1

**Packaging Group:**

II

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### 15. Instructions

None

### 16. Miscellaneous

#### **Recommended Use:**

For forming exothermic copper to copper and copper to steel joints.

The data in this Safety Data Sheet has been supplied as required by the CHEMICALS (HAZARD INFORMATION AND PACKAGING) REGULATIONS 1994, as amended, for the purpose of protecting the health and safety of industrial and commercial users who are deemed capable of understanding and acting on the information provided.

Please ensure that it is passed to the appropriate person(s) in your company, who are capable of acting on the information.

This data sheet does not constitute a user's assessment of workplace risk as required by the HSW Act, COSHH, Management of Health and Safety at Work legislation, or any other Health and Safety legislation.

#### **Further information:**

Contact the Furse Technical Department.

The information given in this Safety Data Sheet is based on current knowledge and experience and is intended to describe the products in terms of their health and safety requirements. It should not therefore be construed as guaranteeing specific properties.

This data is based on our present knowledge. However it shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

# Contact us

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