

Product Name: 172 Standard Weld Metal
Revision Date: 19 October 2015 (rev C)
Page 1 of 8

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: 172 Standard Weld Metal

Product Description: Gray / silver granular metal

Intended Use: Welding metal

COMPANY IDENTIFICATION

Supplier: BURNDY LLC
47 East Industrial Park Drive
Manchester, NH 03109 USA

24 Hour Emergency (INFOTRAC) (800) 535-5053 (US and Canada)
(352) 323-3500 (International)
Burndy Informational Number (603) 647-5000

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION

Health	Environmental	Physical
<ul style="list-style-type: none"> •Acute Toxicity - Oral, Category 4 •Skin Irritation - Category 3 •Eye Irritation - Category 2B 	<ul style="list-style-type: none"> •Acute toxicity - Category 1 	<ul style="list-style-type: none"> •Flammable Solids - Category 1

LABELLING

Symbols:



Flame



Health Hazard



Environmental
Hazard

Signal Word: Warning

Hazard Statements

- H 302: Harmful if swallowed
- H 411: Toxic to aquatic life and may cause long lasting harmful effects
- H 320: Causes eye irritation
- H 228: Flammable Solid
- H315: Causes skin irritation

Precautionary Statements

- P 273: Avoid release to the environment
- P 261: Avoid breathing dust/fume/gas/mist/vapors/spray
- P 264: Wash thoroughly after handling
- P 280: Wear protective gloves/clothing

Product Name: 172 Standard Weld Metal

Revision Date: 19 October 2015 (rev C)

Page 2 of 8

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Reportable Hazardous Substance(s) or Complex Substance(s)**

Name	Common Name/Synonym	CAS #	Percentage	Impurities	Risk Phrases
Copper	-	7440-50-8	50-70	None Known	Refer Section 15
Cuprous oxide	-	1317-39-1	20-40	None Known	
Aluminium (fume or dust)	-	7429-90-5	7-13	None Known	
Calcium flouride	-	7789-75-5	1-5	None Known	
Tin	-	7440-31-5	1-5	None Known	
Iron oxide, black	-	1317-61-9	1-5	None Known	
Calcium Silicon	-	Mixture	1-5	None Known	

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume. The exposure limits of this product, when allowed to enter the environment as dust particulate, are covered under the rules of 29 CFR 1910.1000, Table Z -3, "All inert or nuisance dusts, whether mineral, inorganic or organic."

SECTION 4 FIRST AID MEASURES**ROUTES OF ENTRY:** Inhalation, Ingestion, Contact**EMERGENCY AND FIRST AID PROCEDURES:**

Inhalation: Remove affected person to fresh air; if symptoms persist seek medical attention.

Eye Contact: Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

Skin Contact: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

Ingestion: Give two glasses of water for dilution; induce vomiting as directed by medical personnel; never give anything by mouth to an unconscious person; seek medical attention.

SECTION 5 FIRE FIGHTING MEASURES**GENERAL HAZARDS**

Products of combustion include metal oxides and metal dust.

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use carbon dioxide, water, water fog, dry chemical, chemical foam, dry sand.

Inappropriate Extinguishing Media: None known

Product Name: 172 Standard Weld Metal

Revision Date: 19 October 2015 (rev C)

Page 3 of 8

FIRE FIGHTING PROCEDURES

Fire Fighting Instructions: Firefighters must wear full face piece self - contained breathing apparatus in positive pressure mode.

Unusual Fire Hazards / Combustion Products: BURNDY Weld copper base welding/joining materials are exothermic mixtures, which when reacted, produce hot molten materials with temperatures in excess of 4000° F and a localized release of smoke. The materials are not explosive, ignition temperatures are in excess of 850° F for starting material and 1750° F for base material. They are not shock sensitive, nor are they subject to spontaneous ignition. Should the material be accidentally ignited, the immediate and direct application of large volumes of water will effectively retard the spread of fire and control it. Large amounts of dense, dusty smoke will be liberated during an accidental fire.

Smoke, oxides of carbon; fumes of copper and aluminum. Small amounts of fluoride fume or hydrofluoric acid fume may be released under ignition.

SECTION 6 ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

Confine and segregate product for reuse; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 for detailed instructions; refer to SARA Title III, Section 313, 40 CFR 372 for reporting requirements. Do not discharge into lakes, ponds, streams or public waters.

SECTION 7 HANDLING AND STORAGE**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Storage of BURNDYWeld Exothermic materials should be in a clean dry area and restricted to access by authorized personnel only. Do not subject to rough handling or physical damage, nor excessive vibration. Store in accordance with "This Side Up" labels. Protect from weather and moisture. **DO NOT USE PRODUCTS THAT HAVE BEEN EXPOSED TO MOISTURE.** Before using BURNDYWeld Exothermic Process, personnel should be trained by a BURNDYWeld representative. Read and understand the instruction sheet packaged with the mold, and observe all general and safety instructions.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**EXPOSURE LIMIT VALUES**

Exposure limits/standards (Note: Exposure limits are not additive)

Component name	CAS #	TWA/STEL	NIOSH	ACGIH	Note
Copper	7440-50-8	TWA	0.1 mg/m ³	0.2 mg/m ³	-
Cuprous oxide	1317-39-1	TWA	1 mg/m ³		-
Aluminium (fume or dust)	7429-90-5	TWA	10 mg/m ³	10 mg/m ³	-
Calcium fluoride	7789-75-5	TWA	Not Established	Not established	-
Tin	7440-31-5	TWA	2 mg/m ³	2 mg/m ³	0.2 mg/m ³ (STEL)
Iron oxide, black	1317-61-9	TWA	10 mg/m ³	10 mg/m ³	-
Calcium Silicon	Mixture	TWA	Not established	Not established	-

Product Name: 172 Standard Weld Metal

Revision Date: 19 October 2015 (rev C)

Page 4 of 8

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: NIOSH approved respirator designed to remove airborne particulate present in excess of maximum allowable concentrations due to secondary operations such as mixing, spraying, sanding, buffing, etc. Refer to 29 CFR 1910.134 or European Standard EN 149 for regulations.

Hand Protection: Neoprene or rubber gloves may be used when handling product.

Eye Protection: Protective eyeglasses or chemical safety goggles. Refer to 29 CFR 1910.133 or European Standard EN166.

Other protective clothing or equipment: Safety eyebath nearby.

Work or Hygienic Practices: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

GENERAL INFORMATION

Physical State: Solid

Color: Gray/ Silver

Odor: Characteristic odor

Odor Threshold: Not Available

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Appearance: Gray/ Silver granules

pH: Not Applicable

Viscosity: Not Applicable

Freezing Point: Not Available

Boiling Point: Not Applicable

Flash Point: Not Applicable

Evaporation Rate: Not Applicable

Lower Flammability Limit: Not Applicable

Upper Flammability Limit: Not Applicable

Vapor Pressure: Not Applicable

Vapor Density (Air=1): Not Applicable

Specific Gravity (Water = 1): Approximately 6.0

Solubility in Water: Insoluble

Coefficient of Water/Oil Distribution: Not Available

Auto-ignition Temperature: > 1750 °F (> 955 °C)

Percent Volatile, wt. %: Not Available

VOC content, wt. %: Not Available

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions.

CONDITIONS TO AVOID: Avoid generating airborne dust, avoid moisture.

INCOMPATIBLE MATERIALS: Strong oxidizers, strong acids

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition will not occur if handled and stored properly. In case of fire, smoke, oxides of carbon; fumes of copper and aluminum. Small amounts of fluoride fume or hydrofluoric acid fume may be released under ignition.

Product Name: 172 Standard Weld Metal

Revision Date: 19 October 2015 (rev C)

Page 5 of 8

POSSIBILITY OF HAZARDOUS REACTIONS: HAZARDOUS POLYMERIZATION will not occur**SECTION 11 TOXICOLOGICAL INFORMATION****ACUTE TOXICITY VALUES**

<u>Ingredient</u>	<u>LD50 of ingredient (Specify species and Route)</u>	<u>Conclusion / Remarks</u>
Copper	LD ₅₀ : Not determined LC ₅₀ : Not determined	-
Cuprous oxide	LD ₅₀ : 470 mg / kg Oral-rat LC ₅₀ : 11 µg / m ³ / 24H Inhalation - rat	-
Aluminium (fume or dust)	LD ₅₀ : Not established LC ₅₀ : Not established	-
Calcium flouride	LD ₅₀ : 4250 mg/kg Oral- rat LC ₅₀ : Not established	-
Tin	LD ₅₀ : Not established LC ₅₀ : Not established	-
Iron oxide, black	LD ₅₀ : Not established LC ₅₀ : Not established	-
Calcium Silicon	LD ₅₀ : Not established LC ₅₀ : Not established	-

ACUTE EFFECTS**Eye Contact:** Contact with eyes may cause irritation.**Skin Contact:** None expected, however, prolonged contact may cause irritation.**Inhalation:** Breathing airborne particles or dust from mixing, spraying, sanding, grinding, etc. may cause irritation to respiratory tract. Contains substances which are considered nuisance dusts which require a NIOSH approved respirator when airborne particulate exceeds maximum allowable limit.**Ingestion:** May cause gastric distress, stomach pains, vomiting and diarrhea.**Carcinogenicity:** IARC: NO NTP: NO OSHA Regulated: NO**SECTION 12 ECOLOGICAL INFORMATION**

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. Copper Oxide in the mixture is classified as a Marine Pollutant.

SECTION 13 DISPOSAL CONSIDERATIONS


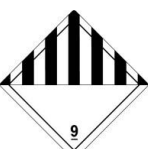

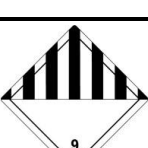
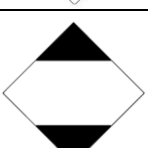
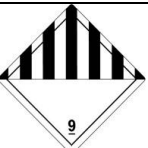

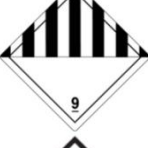

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable Local, State and Federal laws and regulations, and material characteristics at time of disposal.

WASTE DISPOSAL METHOD:

According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used. Dispose of in accordance with Local, State, and Federal Regulations. Do not flush to sanitary sewer or waterway. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals.

Product Name: 172 Standard Weld Metal
Revision Date: 19 October 2015 (rev C)
Page 6 of 8

SECTION 14 TRANSPORTATION

Regulatory Information	UN Number	Proper Shipping Name	Hazard Class	Packing Group	Label (s)	RQ	Additional Information
US DOT	UN3077	Environmentally hazardous substance, solid, n.o.s. (Copper Oxide)	9	III			Only regulated for transportation as a hazardous substance
TDG	UN3077	Environmentally hazardous substance, solid, n.o.s. (Copper Oxide)	9	III			
							May be offered as a Limited Quantity (See TDG Schedule 1)
ADR	UN3077	Environmentally hazardous substance, solid, n.o.s. (Copper Oxide)	9	III			
							May be offered as a Limited Quantity (See ADR Table A)
IATA	UN3077	Environmentally hazardous substance, solid, n.o.s. (Copper Oxide)	9	III			
							May be offered as a Limited Quantity (See IATA PI Y911)
IMDG	UN3077	Environmentally hazardous substance, solid, n.o.s. (Copper Oxide)	9	III	 		Copper oxide is a severe marine pollutant

Product Name: 172 Standard Weld Metal
Revision Date: 19 October 2015 (rev C)
Page 7 of 8

SECTION 15 REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act)

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)

311/312 Hazard Categories
Immediate health

313 Reportable Ingredients:

(a) Indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372

CERCLA (USA - Comprehensive Response Compensation and Liability Act)

(b) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24000 lbs) or greater amounts, if < 4 µ diameter, according to 40 CFR 302

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

There are no chemicals present known to the state of California to cause cancer or reproductive toxicity.

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: Not controlled

IDL (Canadian Ingredient Disclosure List)

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 3.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 3 unless otherwise indicated.

EUROPEAN INVENTORY OF EXISTING CHEMICALS (EINECS):

Chemical Name	CAS Number	EINECS Number	R-Phrase
Cuprous oxide	1317-39-1	215-270-7	R-Not Classified
Copper	7440-50-8	231-159-6	R-Not Classified
Aluminum (fume or dust)	7429-90-5	231-072-3	R-15, R-17
Calcium Fluoride	7789-75-5	232-188-7	R-20/22, R-36/37/38
Tin	7440-31-5	231-141-8	R-11, R-36/37/38
Iron oxide, black	1317-61-9	Not Assigned	R-36/37/38
Calcium Silicon	Mixture	Not Assigned	Not classified

Product Name: 172 Standard Weld Metal
Revision Date: 19 October 2015 (rev C)
Page 8 of 8

WGK Water Quality Rating: 1 VbK Index:

EU RISK (R) AND SAFETY (S) PHRASES:

R11: Highly flammable
R 15: Contact with water liberates extremely flammable gases
R 17: Spontaneously flammable in air
R 20/22: Harmful by inhalation and if swallowed
R 36/37/38: Irritating to the eyes, respiratory system and skin
S 22: Do not breathe the dust.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

SECTION 16	OTHER INFORMATION
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) RATINGS:

Health - 1 Flammability - 0 Physical Hazard - 0 PPE - E

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Date	Description	Sections Affected
2/13/08	Rev 1	
6/2/11	Rev 2	Sec 11, Transportation
8/1/11	Rev 3	All
11/6/12	Rev 4	Sections 2, 3, 4, 5, 6, 7, 9, 10, 11 & 15
3/19/13	Rev 5	Sec 11
9/16/14	Rev 6	2-16
10/30/14	Rev 7	-
10/19/15	Rev C	All

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