MATERIAL SAFETY DATA SHEET

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME :	Sifbronze No 1, Sifbronze No 101
SYNONYMS :	
PRODUCT CODES :	RO[01/10], [16/24/32/48], [01/25/50/10], RO10[15/20/25/30], [01/10/25/50]

SUPPLIER :	Weldability | Sif
ADDRESS :	Peters House, The Orbital Centre, Icknield Way, Letchworth Garden City, Hertfordshire. SG6 1ET. UK.
CONTACT PHONE :	+44 (0) 1462 482200
CONTACT FAX :	+44 (0) 1462 482202

CHEMICAL NAME :	
CHEMICAL FAMILY :	
CHEMICAL FORMULA :	

PRODUCT USE :	Oxy/Acetylene brazing and welding applications.
PREPARED BY :	Technical Support Team, Weldability | Sif

SECTION 2 : COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT:	

SUBSTANCE	CAS NO.	% WT	EC NO.	REACH SUBMISSION NO.
Copper	7440-50-8	56-62	231-159-6	PS378310-17
Silicon	7440-21-3	0.50	231-130-8	PS378310-17
Tin	7440-31-5	0.30-1.5	231-141-8	PS378310-17
Zinc	7440-66-6	Balance	231-175-3	PS378310-17

SECTION 2 NOTES:	

SECTION 3 : HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:	This product consists of bare or coated odourless, solid bronze rods. There are no immediate health hazards associated with this product. This product is neither flammable nor reactive. If involved in a fire, this product may generate irritating fumes and a variety of metal oxides. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

ROUTES OF ENTRY:	

POTENTIAL HEALTH EFFECTS	
EYES:	Contact with the rod form of this product can be physically damaging to the eye. Fumes generated during brazing operations can be irritating to the eyes.
SKIN:	Contact of the rod form of this product with the skin is not expected to be irritating. However, the fumes generated can be irritating to the skin. Symptoms of skin over-exposure may include irritation and redness; prolonged or repeated skin overexposures may lead to allergic contact dermatitis. Contact with the molten rods will burn contaminated skin. Skin absorption is not known to be a significant

	route of over-exposure for any component of this product.
INGESTION:	Ingestion is not anticipated to be a route of occupational exposure for this product.
INHALATION:	Inhalation of large amounts of particulates generated by this product during metal processing operations may result in irritation. Inhalation of copper oxide and zinc oxide fumes can cause metal fume fever. Initial symptoms of metal fume fever can include a metallic or sweet taste in the mouth, dryness or irritation of the throat, and coughing. Further symptoms include sweating, shivering, headache, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, and tiredness. Repeated over-exposure, via inhalation, to the dusts or fumes generated by this product during brazing operations may have adverse effects on the lungs with possible pulmonary edema and emphysema. Chronic over-exposure to copper dust may cause tiredness, stuffiness, diarrhoea, and vomiting.
INJECTION:	Though not a likely route of occupational exposure, injection (via punctures or lacerations in the skin) may cause local reddening, tissue swelling, and discomfort.
ACUTE HEALTH HAZARDS:	The chief acute health hazard associated with this product would be the potential for irritation of contaminated skin and eyes when exposed to fumes during brazing operations. Inhalation of large amounts of particulates generated by this product during metal processing operations may result in irritation. Inhalation of copper oxide and zinc oxide fumes can cause metal fume fever. Inhalation of large amounts of particulates generated by this product during metal processing operations can result in pneumoconiosis. Contact with the molten material will burn contaminated skin or eyes. Severe over-exposure to copper (a component of this product) via ingestion may be fatal.
CHRONIC HEALTH HAZARDS:	Chronic skin over-exposure to the fumes of this product during brazing operations may produce dermatitis. Chronic over-exposure to copper dust may cause tiredness, stuffiness, diarrhoea, vomiting, kidney and liver disorder and discolouration of the skin and eyes. Additionally, rare cases of allergic contact dermatitis have been reported in people working with copper dust.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:	Skin, respiratory disorders and pancreas and liver disorders may be aggravated by prolonged over-exposure to the dusts or fumes generated by these products.
TARGET ORGANS:	For fumes: skin, eyes, respiratory system, kidneys and liver.

CARCINOGENICITY							
OSHA:		**ACGIH:**		**NTP:**		**IARC:**	
OTHER:							

SECTION 4 : FIRST AID MEASURES

EYES:	If fumes enter the eyes, open the affected eye and flush gently with running water for a minimum of fifteen minutes. Seek immediate medical attention.
SKIN:	Begin decontamination with running water. If molten material contaminates the skin, immediately run under cold water for a minimum of fifteen minutes. Seek medical attention if any adverse reaction occurs.
INGESTION:	Do not induce vomiting unless directed by medical personnel. Rinse mouth with water only if the person is conscious.
INHALATION:	Remove to fresh air. Seek medical attention if necessary.
NOTES TO PHYSICIANS OR FIRST AID PROVIDERS	

SECTION 5 : FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER:	
(% BY VOLUME) LOWER:	

FLASH POINT:	Not flammable				
F:					
C:					
METHOD USED:					
AUTOIGNITION TEMPERATURE:					
F:					
C:					
NFPA HAZARD CLASSIFICATION					
HEALTH:		**FLAMMABILITY:**		**REACTIVITY:**	
OTHER:					

HMIS HAZARD CLASSIFICATION					
HEALTH:		**FLAMMABILITY:**		**REACTIVITY:**	
PROTECTION:					

EXTINGUISHING MEDIA:	Water spray, halon, dry chemical, carbon dioxide or foam spray.
SPECIAL FIRE FIGHTING PROCEDURES:	
UNUSUAL FIRE AND EXPLOSION HAZARDS:	
HAZARDOUS DECOMPOSITION PRODUCTS:	

SECTION 6 : ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:	Wear protective equipment while handling. Do not discard as refuse.

SECTION 7 : HANDLING AND STORAGE

HANDLING AND STORAGE:	As with all chemicals, avoid getting this product on you or in you. Wash thoroughly after handling this product. Do not east or drink while handling this product. Use in a well ventilated location. Use ventilation and other engineering controls to minimise potential exposure to this product. All employees who handle this material should be trained to handle it safely. Avoid breathing fumes of this product during brazing operations. Open containers on a stable surface. Packages of this product must be properly labeled.
OTHER PRECAUTIONS:	Store packages in a cool, dry location. Storage in an atmosphere that is wet, moist, or highly humid may lead to corrosion of this product. Store away from incompatible materials.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:	Ensure sufficient ventilation, local exhaust, or both to keep welding fumes and gases from breathing zone and general area. Prudent practice is to ensure eyewash/safety shower stations are available near areas where this product is used.
VENTILATION :	Use with adequate ventilation to ensure exposure levels are

	maintained below the limits provided in Section 2 (Composition and Information on Ingredients).
RESPIRATORY PROTECTION:	Maintain airborne contaminant concentrations below guidelines listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed (i.e., a Weld Fume Respirator, or Air-Line Respirator for welding in confined spaces), use only protection compliant with EN12941 or EN149.
EYE PROTECTION:	Safety glasses. When this product is used in conjunction with welding, wear safety glasses, goggles, or face-shield with filter lens of appropriate shade number under EN169.
SKIN PROTECTION:	Wear gloves for routine industrial use. When this product is used in conjunction with welding, wear gloves that protect from sparks and flame.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:	Wear body protection appropriate for task. Ensure all PPE meets appropriate EN or local standards.
WORK HYGIENIC PRACTICES:	As with all chemicals, avoid getting this product on you or in you. Wash hands after handling this product. Do not eat or drink while handling this product. Use ventilation and other engineering controls to minimize potential exposure to this product.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Bare or coated bronze rods
ODOUR:	Odourless
PHYSICAL STATE:	
pH AS SUPPLIED:	
pH (Other):	
BOILING POINT:	2595℃
F:	
C:	
MELTING POINT:	1600-1900℃
F:	
C:	
FREEZING POINT:	
F:	
C:	
VAPOR PRESSURE (mmHg): **@**	
F:	
C:	
VAPOR DENSITY (AIR = 1): **@**	
F:	
C:	
SPECIFIC GRAVITY (H20=1): **@**	
F: **C:**	
EVAPORATION RATE:	
BASIS(=1):	
SOLUBILITY IN WATER:	
PERCENT SOLIDS BY WEIGHT:	
PERCENT VOLATILE:	
BY WT/ BY VOL @	
F:	

C:	
VOLATILE ORGANIC COMPOUNDS (VOC):	
WITH WATER: LBS/GAL	
WITHOUT WATER: LBS/GAL	
MOLECULAR WEIGHT:	
VISCOSITY: @	
F:	
C:	

SECTION 10 : STABILITY AND REACTIVITY

	STABLE	**UNSTABLE**
STABILITY:	Stable	

CONDITIONS TO AVOID (STABILITY):	
INCOMPATIBILITY (MATERIAL TO AVOID):	Strong acids, strong oxidisers, some halogenated compounds.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	Thermal decomposition products can include copper and zinc compounds and a variety of metal oxides.
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID (POLYMERIZATION):	Uncontrolled exposure to extreme temperatures, incompatible materials.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:	
RISK PHRASES:	
SAFETY PHRASES:	7 Keep container tightly closed and dry.
SYMBOL(S):	

SECTION 12 : ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:	N
RISK PHRASES:	50/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
SAFETY PHRASES:	61 Avoid release to the environment. Refer to special instructions
SYMBOL(S):	

SECTION 14 : TRANSPORT INFORMATION

ROAD TRANSPORTATION	
PROPER SHIPPING NAME:	
HAZARD CLASS:	Not applicable.
UN/ID NUMBER:	
PACKING GROUP:	
LABEL STATEMENT:	

WATER TRANSPORTATION	
PROPER SHIPPING NAME:	
HAZARD CLASS:	Not applicable.
UN/ID NUMBER:	
PACKING GROUP:	
LABEL STATEMENTS:	

AIR TRANSPORTATION	
PROPER SHIPPING NAME:	
HAZARD CLASS:	Not applicable.
UN/ID NUMBER:	
PACKING GROUP:	
LABEL STATEMENTS:	

OTHER TRANSPORT CONSIDERATIONS:	

SECTION 15 : REGULATORY INFORMATION

RISK PHRASES	SAFETY PHRASES	INDICATION(S) OF DANGER	WATER HAZARD CLASS
50, 53	7, 61		N

CHEMICAL INVENTORY:	Substances in this preparation are on the EINECS inventory

SECTION 16 : OTHER INFORMATION

OTHER INFORMATION:	The information supplied in this Safety Data Sheet is designed only as guidance for safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials in any other process.
PREPARATION INFORMATION:	

For further information, contact Weldability | Sif technical support on **0870 330 7757** or email **service@wholeweld.co.uk**

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