Wuhan Sunny Industry & Trade Co.,Ltd

Material Safety Data Sheet

For welding consumables and related products

Essentially similar to U.S Department of labor form OSHA-20

This Material Safety Data Sheet is offered pursuant to EN ISO 15011-4, Other government regulations must be reviewed for applicability to these products.

Version 201901

Section 1 - Identification of Products

Manufacturer/Supplier name:	Wuhan Sunny Industry & Trade Co.,Ltd
Address:	1282 jiefang avenue,Wuhan,China Post code:430010
Telephone number:	86-27-82726189
Product type:	Flux cored welding wire
Trade name:	HBW71T-1M(C),HBW71T-11,HBW71T-GS,
AWS classification:	AWS A5.20 E71T-1M(C),E71T-11,E71T-GS,

Section 2 - Hazardous Components/Identity Information

Components	CAS No.	TLV(mg/m3)
Iron	7439-89-6	10(for all Fe products combined into Fe2O3)
Manganese	7439-96-5	0.2(as inorganic compounds of Mn)
Titanium Dioxide	13463-67-7	10(dust)
Silicon	7440-21-3	10(welding fume)
Fluorspar	7789-75-5	2.5 (as F)
Calcium Carbonate	1317-65-3	2(as CaO)
Aluminum	7429-90-5	5(dust)
Copper	7440-50-8	1 (Dust)

Section 3 - Composition and Information on Ingredients

Typical figures

Code	C	Si	Mn	S	P	Cr	Ni	Al
E71T-1	0.05	0.45	0.60	0.03	0.03	-	-	-
E71T-11	0.2	0.3	0.60	0.03	0.03	-	-	1.45
E71T-GS	0.2	0.3	0.60	0.03	0.03	-	-	1.45

Section 4 - Property Physical/Chemical characteristics

Boiling point	N/A	Specific gravity(H2O=1)	N/A
Vapor pressure(mm Hg)	N/A	Melting point	N/A
Vapor density(AIR=1)	N/A	Evaporation rate(Butyl acetate=1)	N/A

Solubility in water N/A

Odor and Appearance: Copper coated or bare, solid steel wire or rod, odorless.

Section 5 - First Aid Measures

Route(s) of entry: inhalation,skin,ingestion

Electric arc welding may create one of more of the following health hazards:

Arc Rays can injure eyes and burn skin Heat Rays (infrared radiation) from hot metal can injure eyes.

Electric Shock can Kill.

Noise can injure hearing.

Shielding gases such as Argon, Helium, & Carbon Dioxide are axphyxiants & adequate ventilation is required.

Carcinogenicity: Chromium, Nickel, Cobalt and their compounds are on the IARC & NPT lists as posing a carcinogenetic risk to humans.

Fumes & Gases can be dangerous to your health. Common entry is by inhalation.

Signs and symptoms of exposure: see below

Medical conditions from exposure

Short term to welding fumes-dizziness nausea,dryness & irritation of nose,eyes and throat,chest tightness,fever,allergic reaction,long term-siderosis,believed to affect pulmonary function. Nickel and Chromium compounds are required by Osha to be considered carcinogenic.

Emergency and first aid procedures

Remove to fresh air,obtain medical attention. Employ first aid techniques recommended by AM.Red Cross.

Section 6 - Fire Fighting Measures

Flash point (method used) N/A	Flammable limits N/A	LEL N/A	UEL N/A

Extinguishing media See below

Special fire fighting procedures See below

Nonflammable, however welding arcs and sparks can ignite combustible and flammable products. Ref. Z49.1, NFPA 51B. Only the packaging material will burn.

Section 7 - Accidental Release Measures

Spill and leak response: These products are solid metal rods, with no spill or leak hazards.

Section 8 - Handling and Storage

All employees who handle these products should be trained to handle it safely. Use in a well-ventilated location. Avoid breathing fumes of these products during welding operations. Open containers on a stable surface. Packages of these products must be properly labeled.

Store packages in a cool, dry location. Storage in an atmosphere that is wet, moist, or highly humid may lead to corrosion of these products. Store away from incompatible materials (see Section 9, Stability and Reactivity).

Section 9 - Stability and Reactivity Data

Stability	Unstable	No	Conditions to avoid
Stable	Stable	Yes	None unless otherwise specified

Incompatibility (Metals to avoid) None

Hazardous decomposition products

Welding fumes and gases cannot be classified easily. The composition and quantity of welding fumes and gases are dependent upon the metal being welded, the process procedure, and the electrodes used. Other conditions that also influence the composition and quantity of fumes and gases to which a welder may exposed include: Coatings off the metal being welded (such as paint, galvanizing, and plating), the number of welders and work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). When the electrode is consumed, the fume and gas decomposition products generate are different in percent and form from the original ingredients listed in SECTION 2 Fume and gas decomposition products, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may increase or decrease by times the original concentration of the electrode. Also, new compounds not found in the electrode may form. Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of materials listed in SECTION 2, plus those from the base metal and coating, etc., as noted above.

Reasonably Expected Decomposition Products: Decomposition products derived from the normal use of these products include a complex of the oxides of the materials listed in Section 2, as well as carbon dioxide and carbon monoxide. Ozone and Nitrogen oxides may be formed by the radiation from the arc.

The fume limit for Chromium, Nickel and/or Manganese may be reached before the general limit for welding fumes of 5.0 mg/m3 is reached. Monitor fumes for Chromium, Nickel and Manganese.

Notes: (1) The only way to determine the true identity of decomposition products is by sampling

and analysis. The composition and quantities of the fumes and gases to which a worker may be overexposed can be determined from a sample obtained from inside the welder's helmet, if worn, or in the worker's breathing zone. (2) See ANSI/AWS F1.5, "Methods for Sampling and Analyzing Gases from Welding and Allied Processes" and ANSI/AWS F1.1, "Method for Sampling Air borne Particles Generated by Welding or Allied Processes" available from the American Welding Society.

Section 10 - Control of Individual Protection

Respiratory measures

Use respirable fume respirator or air supplier respirator when welding in a confined space or where local exhaust or ventilation does not keep the exposure below TLV. Where respiratory protection is necessary, NIOSH approved respiratory protection should be used. A NIOSH approved Type TC-21-C mask is recommended.

Ventilation

Use enough ventilation, local exhaust at the arc, or both to keep exposure within legal limits. In the worker's breathing zone and the general area, the fumes and gases must be kept the TLVs and the equivalent exposure must compute to less than one. Train welders to keep their heads out of the fumes.

Local exhaust	---
Mechanical(general)	---
Special	---
Other	---

Protective gloves: See other protective equipment

Eye protection

Wear helmet,face shield with filter lens,protective screens,flash goggles to shield others,start with shade too dark then go to lighter shade which gives sufficient view of weld zone.

Other protective equipment

Hand,head,body protection to prevent injury from radiation,sparks and electrical shock.

Work/Hygienic practices

Do not touch live electrical parts and insulate from work and ground. For maximum safety:
Be certified for, and wear a respirator at all times when welding or brazing.

Section 11 - Considerations of Disposal

Spill and leak procedure: N/A

Waste and disposal method

Prevent waste from contaminating surrounding environment. Discard any product residue,disposable container or liner in environmentally acceptable manner. In full compliance with federal,state and local regulations.

Precautions to be taken in handling and storing: None

Other precautions

Use product in accordance with ANSI standard Z49.1,safety in welding and cutting available from

Section 12 - Information of Transportation

This material is NOT hazardous.
Proper shipping name: NOT applicable
Hazard class number and description: NOT applicable
UN Identification number: NOT applicable
Packing group:NOT applicable
DOT labels required:NOT applicable

Section 13 - Ecological Information

All work practices must be aimed at eliminating environmental contamination.
Welding consumables and materials could degrade/weather into components originating from the consumables or from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater.

Section 14 - Toxicologiques Information

TOXICITY DATA:Presented below are human toxicological data available for the components of these products present in concentration greater than 1%. Other data for animals are available for the components of these products, but are not presented in this Material Safety Data Sheet.

COPPER:
TDLo (oral, human) = 120 g/kg; gastrointestinal tract effects
IRON:
TDLo (oral, child) = 77 mg/kg; BAH, gastrointestinal tract, blood effects
MANGANESE:
TCLo (inhalation, man) = 2300 g/m3; BRN, central nervous system effects

SUSPECTED CANCER AGENT: Carbon (a component of these products) is on the following lists:
IARC Group 3, Not Classifiable as to Carcinogenicity to Humans. NIOSH-X, Carcinogen defined with no further categorization.
Manganese (a component of these products) is on the following list:
EPA-D, Not Classifiable as to Human Carcinogenicity (inadequate human and animal evidence of carcinogenicity or no data available).

Inhalation of welding fumes and gases can be dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contamination and processes. The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans.
Acute toxicity: Overexposure to welding fumes may result in symptoms like metal fume fever,

dizziness, nausea, dryness or irritation of the nose, throat or eyes.
Chronic toxicity: Overexposure to welding fumes may affect pulmonary function. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait.

Section 15 - Regulatory Information

Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.
Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. electric shock can kill.
ARC rays and sparks can injure eyes and burn skin. Wear correct hand, head, eye and body protection.

U.S. Federal Regulations
TSCA STATUS: All components of this product are listed on the TSCA inventory.
CERCLA HAZARDOUS SUBSTANCES: Beryllium, Chromium, Chromium compounds, Copper, Lead, Manganese, Nickel, Zinc.
SARA TITLE III: Section 311/312 Physical and Health Hazard Categories: Immediate (acute), delayed (chronic) if particulates/fumes are generated during processing. Section 313 Toxic Chemicals: Aluminum (fume/dust), Beryllium, Chromium, Copper, Lead, Manganese, Nickel, Vanadium (fume/dust), and Zinc (fume/dust).

International Regulations
EUROPEAN COMMUNITY: All components of this product are listed on ECOIN, the European Core Inventory.

Section 16 - Other Information

This Material Safety Data Sheet is offered pursuant to OSHA’s Hazard Communication Standard (29 CFR 1910.1200). Other government regulations must be reviewed for applicability to these products. The information contained herein relates only to the specific product. If the product is combined with other materials, all component properties must be considered. To the best of the Sunny Industry & Trade Co.,Ltd’s knowledge, the information and recommendations contained in this publication are reliable and accurate as of the date of issue. However, accuracy, suitability, or completeness are not guaranteed, and no warranty, guarantee, or representation, expressed or implied, is made by Sunny Industry & Trade Co.,Ltd. as to the absolute correctness or sufficiency of any representation contained in this and other publications Sunny Industry Group assumes no responsibility in connection therewith; nor can it be assumed that all acceptable safety measures may not be required under particular or exceptional conditions or circumstances.
Data may be changed from time to time. Be sure to consult the latest edition.

Sunny Industry & Trade Co.,Ltd requests the users of these products to study this Material Safety

Data Sheet(MSDS) and become aware of product hazards and safety information. To promote safe use of these products a user should:

notify its employees, agents and contractors of the information on this MSDS and any product hazards/safety information.

furnish this same information to each of its customers for these products.

request such customers to notify employees and customers for the same product hazards and safety information.