



SAFETY DATA SHEET

For Welding Consumables and Related Products

Conforms to OSHA Hazard Communication Standard 29 CFR 1910.1200(G) and GHS Rev 03.

SECTION I : IDENTIFICATION

Supplier Name : WKS WELDING PRODUCTS PTE LTD
Address : 22 TUAS AVENUE 10, SINGAPORE639145
Telephone No. : 68982292
Product Type : Carbon Steel Welding Wire
Trade Name : GOLDEN WELD
Classification : AWS A5.18 ER70S-6
ASME SECII PT C-2017 SFA-5.18 ER70S-6

SECTION II : HAZARD(S) IDENTIFICATION

The fumes and gases produced during welding with the normal use of this product are covered by Section 11; see it for industrial hygiene information.

Emergency overview:

Product is inert, no special hazardous, handling or spill procedures are required.

Physical stage:

Solid, product is packed in wire form. Stable, not self-vaporizing nor self-dissolving.

Color:

Copper brownish.

Potential acute health effects:

No known to have any acute health effect.

Flammable:

Not flammable at all.

SECTION III : COMPOSITION / INFORMATION ON INGREDIENTS

IMPORTANT: This section covers the materials from which this product is manufactured. The fumes and gases produced during welding with the normal use of this product are covered by Section V; see it for industrial hygiene information. CAS Number shown is representative for the ingredients listed. All ingredients listed may not be present in all sizes.

(1) The term "hazardous" in "Hazardous Materials" should be interpreted as a term required and defined in the Hazards Communication Standard and does not necessarily imply the existence of any hazard. All materials are listed on the TSCA inventory.



No	Ingredients	CAS No.	Product		Welding Fumes	
			Range	Typical	ACGIH TLV	OSHA PEL
			(Wt %)	(Wt %)	(mg/m ³)	(mg/m ³)
1	Carbon (C)	7440-44-0	0.10% Max	0.07%	9000 ^(a)	9000 ^(a)
2	Manganese (Mn)	7439-96-5	2.00% Max	1.60%	0.1 ^(b)	5 ^(b)
3	Silicon (Si)	7440-21-3	1.20% Max	0.80%	0.1 ^(c)	10.0 ^(c)
4	Copper (Cu)	7440-32-6	0.10% Max	0.01%	0.2 ^(d)	0.1 ^(d)
5	Sulphur (S)	7704-34-9	0.035% Max	0.01%	0.65 ^(e)	13.0 ^(e)
6	Phosphorous (P)	7803-51-2	0.025% Max	0.01%	N.E ^(f)	N.E ^(f)
7	Iron (Fe)	7439-89-6	97% Min	97.50%		

Remarks

a) Refer as Carbon Dioxide

b) Refer as manganese fume

c) Refer as silicon dioxide dust

d) Refer as copper fume

e) Refer as sulphur dioxide

f) Refer as phosphorous oxide

SECTION IV : FIRST-AID MEASURES

Contact:

Eyes : Non-hazardous, avoid contact to prevent injury.

Skin : Non-hazardous, avoid regular contact to prevent possible allergic reaction for certain people.

Inhalation : No possible for inhalation.

Ingestion : No possible for digestion.

IN CASE OF ELECTRICAL SHOCK, turn off power and follow recommended treatment. In all cases call a physician.

SECTION V : FIRE-FIGHTING MEASURES

Flash point:

This product is not flammable.

Suitable extinguishing media:

Use extinguishing measures that are appropriate to the surrounding environment.

Potential hazard when contact with acids:

Avoid contact with any kind of acids as the reaction of acids with iron content will release hydrogen gas. Accumulation of hydrogen in an enclosed environment may post a fire or explosion hazards.

Potential hazard during welding:

Welding arc and sparks can ignite combustibles and flammable products. Welding ray will cause skin burn for prolonged exposure.



SECTION VI : ACCIDENTAL RELEASE MEASURES

Accidental release : No major hazard.

Waste disposal : No special requirement and best solution is for sending it to scrap metal collector or manufacturer for recycling purpose.

SECTION VII : HANDLING AND STORAGE

Handling : Avoid exposure to rain water as this will make product rusty and unusable

Storage : Store product indoor and avoid rain water. Keep it away from contacting with acids, which could release hydrogen gas (flammable) due to its chemical reaction with acids

SECTION VIII : EXPOSURE CONTROLS / PERSONAL PROTECTION

Overexposure to welding fume:

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

Short-term (acute) overexposure to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema).

Long-term (chronic) overexposure to welding fumes can lead to siderosis (iron deposits in lung) and may affect pulmonary function.

Arc Rays can injure eyes and burn skin. Skin cancer has been reported.

Electric Shock can kill. If welding must be performed in damp locations or with wet clothing, on metal structures or when in cramped positions such as sitting, kneeling or lying, or if there is a high risk of unavoidable or accidental contact with work piece, use the following equipment:

Semiautomatic DC Welder, DC Manual (Stick) Welder, or AC Welder with Reduced Voltage Control.

Use ventilation for removal of welding fume:

Use air ventilation at point of usage (welding) to remove welding fumes. Suction or vacuum system is a preferred option. Points of suction should be close to the welding point.

Personal Protective clothes and equipment:

Wear head, hand, and body protection which help to prevent injury from radiation, sparks and electrical shock. At a minimum, this includes welder's gloves and a protective face shield and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground.

Avoid welding rays to contact with eyes and skin. Wear long sleeve and dark glass when performing welding.

Use appropriate welding vest and appropriate hands glove to avoid contact with hot welding parts.



SECTION IX : PHYSICAL AND CHEMICAL PROPERTIES

Physical Status	Solid
Appearance	Steel Wire
Colour	Brownish for EQ70S
Colour	Silver for EQ70S-Z
Viscosity	Not Applicable
Evaporation Rate	Product will not evaporate
Vapor Density	Not Applicable
VOC Content	Not Applicable
Percent Volatile	Not Applicable
Vapor Pressure	Not Applicable

Solubility	Insoluble
pH	Not Applicable
Odor	Odorless
Odor Threshold	Not Applicable
Flammability	Product is not flammable
Auto Ignition	Not Applicable
Decomposition Temp	Not Applicable
Melting Point	1600°C
Boiling Point	2800°C
Specific Gravity	7.85

SECTION X : STABILITY AND REACTIVITY

Chemical stability	: Stable and no hazardous polymerization will occur
Condition to avoid	: Exposure to acids and alkaline is to be avoid
Hazardous during welding	: Fumes and gases produced by welding cannot be simply classified. Use ventilation or vacuum to remove welding fumes from welders' breathing zones

SECTION XI : TOXICOLOGICAL INFORMATION

The product itself is not toxic. The only concern is workers' exposure to the welding fume during welding. In most of the cases, it is OSHA's mandatory requirement to have welding fume to be extracted out from welding zone and welders' breathing zone.

Hence, some toxicological information of potential hazardous elements and their poisoning symptoms are summarized in table below.

No	Ingredients	CAS No.	OSHA PEL (mg/m3)	Poisoning symptom
1	Carbon Monoxide (CO)	630-08-0	55.0	Headache, nausea, vomiting, dizziness, unconsciousness or even death
2	Carbon Dioxide (CO ₂)	124-38-9	9000.0	Headache, flushed skin, irregular heartbeat, dizziness and unconsciousness or even death
3	Nitrous oxide (Nox)	10024-97-2	55.0	Drowsiness, dizziness, euphoria and unconsciousness
4	Manganese Fume (Mn)	7439-96-5	5.0	Sleepiness, weakness in legs, uncontrolled laughter or pneumonia for prolonged exposure.
5	Copper fume (Cu)	1317-38-0	0.1	upper respiratory tract irritation & nausea. No ill effects resulted from exposures to copper fumes at concentrations up to 0.4 mg/m ³
6	Sulphur dioxide (S)	7446-09-0	5.0	Pungent odor, irritation to eye, nose & throat, cough, chest pain, cyanosis



SECTION XII : ECOLOGICAL INFORMATION

No specific adverse effect known so far.

SECTION XIII : DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulation.
Alternative is to sell wire to scrap metal dealer or send back to manufacturer for recycling

SECTION XIV : TRANSPORT INFORMATION

Follow local Department of Transport regulation.
Product is usually heavy and they must be securely fastened during transportation and covered from rain water.

SECTION XV : REGULATORY INFORMATION

No specific regulatory information is further needed.

SECTION XVI : OTHER INFORMATION

Training:

Workers should be informed and trained in the proper use and handling of this product as required under the respective local regulations.

Liability:

The information furnished here was gathered with the greatest care, and the knowledge available on the date of issue. It does not include any warranties or responsibility regarding the suitability of the information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

The information contained in this Safety Data Sheet relates only to specific materials designated and may not be valid for such material used in combination with any other material or in any process.

The product is supplied on the condition that the user accepts the responsibility to satisfy himself/herself as to the suitability and completeness of such information for himself / herself own particular use.

The customer should provide this Safety Data Sheet to any person involved in the usage of this materials.

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