1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Electronic welding rod
Product Code: E7018
Product Grade: φ2.5mm/3.2mm *350mm, φ4.0mm /5.0mm *400mm
Product Use: Electric arc welding

Supplier Information
Company Name: ANCHOR WELD (WUHAN) TECHNOLOGY CO., LTD
Address: ROOM A2-34-03, GUANNAN INDUSTRIAL COMPLEX, EAST LAKE HIGH TECH DEVELOPMENT ZONE, WUHAN 430084, CHINA
Tel: 0086 27 86952088
Fax: 0086 27 86952088
Email: JILL@AKWELD.COM
Emergency Telephone: 0086 27 86952088

2. HAZARDS IDENTIFICATION

Appearance: Welding electrode, metallic, dark grey, powder, insoluble in water
Odor: Odorless
Contact with eyes: Looking into the welding / brazing flame with incorrect or insufficient eye protection may cause arc-eye.
Contact with skin: May cause blistering of the skin
Inhalation: Inhalation of fumes formed during welding and or cutting may be harmful.
The product is harmless as it is.
Dangers when used: UV and infrared radiation, Fumes and dust, Electric shocks can kill.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Preparation

Ingredients Name	Content/%	CAS NO.	EU NO.	RISK PHRASES
Carbon iron (Fe)	60-80	7439-89-6	231-096-4	-
Marble	5-10	mixture	mixture	-
Fluorite	5-10	mixture	mixture	-
Medium manganese steel	1-5	mixture	mixture	-
Iron powder(Fe)	1-5	7439-89-6	231-096-4	-

Note: See Section 8 of MSDS for exposure limit data for these ingredients. Full text of risk phrases appearing in section 3: see section 16.

The preparation is not classified as dangerous according to EC regulation
This product is not hazardous according to the criteria specified in 29CFR 1910.1200 (Hazard Communication Standard).
This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.

4. FIRST AID MEASURES

Contact with skin
Burned skin must be flushed with large amounts of cold water.
Cover with a sterile bandage to prevent infection in burn sores.
Burns must be treated by a physician.
Contact with eyes
Irrigate eyes thoroughly whilst lifting eyelids
Seek immediate medical attention
Ingestion
Not applicable
Inhalation
Remove patient to fresh air
Seek medical attention if ill effects occur

5. FIRE FIGHTING MEASURES

Flammable Properties
Not flammable.
Flash Point: None
Flammable limits
LFL: Not Applicable
UFL: Not Applicable
Extinguishing Media: Use appropriate fire extinguisher for surrounding environment.
Fire & Explosion Hazards: None known.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

No special precautions are required for this product

Environmental Precautions

No special precautions are required for this product

Clean Up Actions

Remove by mechanical means

7. HANDLING AND STORAGE

Handling

Ensure adequate ventilation

Wear eye/face protection (S39)

Wear suitable gloves (S37)

Storage

Keep in a cool, dry place

Protect from moist air

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure controls

If practicable, engineering controls should be provided where airborne concentrations exceed exposure limits

Occupational exposure controls

Wear suitable protective clothing, including eye/face protection and gloves (leather are recommended)

In case of insufficient ventilation, wear suitable respiratory equipment (S38)

Wear suitable filter lenses when welding / cutting.

EXPOSURE GUIDELINES

Ingredients	Threshold Limit Values
Iron oxide fume (as Fe)	TLV (TWA) 5 mg/m3 (welding fumes)
Manganese and its inorganic compounds (as Mn)	TLV (TWA) 0.5 mg/m3 (welding fumes)
Carbon Dioxide	OEL 8hr TWA 5000ppm
Carbon Monoxide	OEL 8hr TWA 30ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Color: Dark grey

Form: Metal solid rod

Odor: Odorless

PH: Not available
Vapor pressure: Not relevant
Vapor Density: Not relevant
Boiling point / range: Not relevant
Melting Point: ~ 1040ºC
Solubility in water: Insoluble
Density: ~6.8 g/cm3
Explosive / ignition point: Non flammable. No fire or explosion hazard exists

10. STABILITY AND REACTIVITY

There is no stability or reactivity hazards from welding rods as supplied.
Hazardous decomposition products such as metal oxide fumes and gases (see Section 8) are produced during welding.

11. TOXICOLOGICAL INFORMATION

Welding fumes if inhaled can potentially produce several differing health effects caused by the metal containing particles and the gases produced during the welding process, both of which are present in the 'fumes'. The exact nature of any likely health effect is dependent on the consumable, material being welded, weld process, all of which affect fume quantity and composition, as well as the use of adequate ventilation, respirators, or breathing equipment as circumstances require. Inhalation of the fumes/gases produced during welding may lead to irritation to the nose throat and eyes. The range of health effects include respiratory effects with symptoms such as asthma, impaired respiratory and lung function, chronic bronchitis, metal fume fever, pneumoconiosis , possible emphysema and acute pulmonary oedema.
Other potential health effects at elevated levels of exposure include central nervous effects possible lung cancer, bone disease, skin and fertility effects. Which of these health effects is potentially likely is related to the fume composition, and this needs to be consulted with the specific toxicity data below to assess the health risk when using any particular welding process. Unprotected skin exposed to radiation from the brazing flame may burn or redden. Discomfort in burning provides adequate warning before any skin damage occurs. Infrared radiation from the brazing flame can affect the unprotected eye, and may cause eye cataracts and possible necrosis of the retina.
Specific effects relevant to major particulate and gaseous fume constituents produced when welding with these rods:
Iron
The chief component of fume generated by welding carbon steels is iron oxide. Iron oxide is generally considered a nuisance material and unlikely to cause any significant health effects. The fume particles however accumulate in the lungs and lead to a benign pneumoconiosis called siderosis.
Manganese
Manganese compounds are also found in carbon steel welding fumes. Manganese is mainly a systemic chronic toxin, although exposure to high particulate concentrations can cause some respiratory irritation.

Overexposure or inhalation of excessive amounts of manganese has been shown to affect pulmonary function, blood and may cause irreversible central nervous system damage (manganism) which resembles Parkinsons disease. Symptoms of manganism include tremors, impaired speech, facial expression changes, slow clumsy movements and eventually impaired walking. The symptoms are typically not apparent for several years.

Carbon monoxide and carbon dioxide

Carbon monoxide (CO) is a chemical asphyxiant and its toxicity is due to its affinity for oxygen carrying blood haemoglobin causing fatigue, weakness, dizziness and eventual unconsciousness and possible death. Carbon dioxide (CO2) is mainly an asphyxiant but can exert some toxic properties by increasing pulse and heart rate. During the normal use of these welding rods, these gases are mainly formed through oxidation of any carbon in the components, and from the flame combustion products.

Nitrogen oxides

These gases are formed due to interactions of the flame with the surrounding air. Nitroxen oxides can produce eye, respiratory and lung irritation and also can produce longer term lung effects such as decreased lung capacity, chronic bronchitis, and emphysema. Of particular concern with both gases is that exposure to high levels (eg due to build up in confined spaces) can result in acute lung effects such as delayed pulmonary oedema.

12. ECOLOGICAL INFORMATION

Ecotoxicity

On available data, substance is not harmful to aquatic life

Mobility

Sinks in water

Persistence and Biodegradability

No information available

Bioaccumulation Potential

No information available

Other Adverse Effects

No environmental problems are expected when the product is used / handled correctly.

In its intended use, the product will not be released into the environment.

13. DISPOSAL CONSIDERATIONS

Classification

EU Waste class: -

Disposal considerations

No special requirements

14. TRANSPORT INFORMATION

The preparation is not classified as dangerous goods.

Proper shipping name: None
Hazard class: NA
Packing group: NA
Identification number: Not regulated

15. REGULATORY INFORMATION

European Labeling in Accordance with EC Directives

Classification and labeling

Not classified as hazardous for supply

Risk Phrases

Not applicable

Safety Phrases

- Not applicable

US Regulations

No SARA 313 chemicals are present above the reporting threshold.

Product is not considered to be a hazardous chemical under the Hazard Communication Standard.

Inventory Status

Inventory	Status
United States (TSCA)	One or more ingredients are on the inventory or exempt from listing.
Europe (EINECS)	One or more ingredients are on the inventory or exempt from listing.

16. OTHER INFORMATION

Risk phrases in section 3:

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This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

* * * END OF MSDS * * *