1.- IDENTIFICATION OF PRODUCT AND COMPANY

1.1 Product identification: **GW TIG ER70S-6 ROD**

1.2 Identified pertinent uses of the substance or mixture and uses that are advised against: Arc welding

Classification(s):
AWS A5.18: ER70S-6 EN ISO 636-A-W: 42 4 W3Si1

1.3 Supplier's details:

Chaves Bilbao S.L.,
C/Bizkargi, 6 Pol. Ind. Sarrikola
E-48195 LARRABETZU Bizkaia
Tel. +34 94 412 34 56
www.chavesbao.com

1.4 Emergency telephone number:

Toxicology Information Service
Telephone: Spain: **+34 91 562 04 20** (24/7/365)
Other: National support - Poison Centres (europa.eu)

2.- IDENTIFICATION OF HAZARDS

General Emergency Considerations: This product is not normally considered hazardous when transported, however, prolonged exposure through inhalation of welding fumes could be detrimental to people's health. Gloves should be used during handling to avoid cuts or scratches.

2.1 Product classification: N.A.

2.2 Label items: N.A.

2.3 Other hazards:

Contact with the skin does not normally carry any risk but there is a possibility of allergic reaction.
People who wear pacemakers should not approach areas in which welding or cutting operations take place without prior authorisation from both their doctor and the pacemaker manufacturer.
The greatest risks involved in using this product in welding procedures are as follows: heat, radiation, fumes and electric shock.

Fumes:
Over-exposure to welding fumes can cause dizziness, fever from the metal fumes, nausea and dryness and irritation of the nose, throat and eyes. Continued over-exposure to these fumes can affect pulmonary function. Prolonged inhalation of chromium compounds, above the limits of risk-free exposure, can cause cancer. Over-exposure to manganese and manganese compounds above the limits of risk-free exposure can cause irreversible damage to the central nervous system, including the brain, with symptoms that may include difficulty speaking, lethargy, trembling, muscle weakness, psychological alterations and spastic gait.

Heat:
Projections, molten metal and the arc can cause burns and start fires.

Radiation:
The arc can cause serious damage to the eyes and skin.

Shock:
Electric shocks can kill.

3.- COMPOSITION

3.2 Mixtures:

SUBSTANCE	CAS No.	%
Chromium (Cr)	7440-47-3	0.5
Copper (Cu)	7440-50-8	0.5
Iron (Fe)	7439-89-6	>90
Manganese (Mn)	7439-96-5	2.00
Silicon (Si)	7440-21-3	1.00

4.- FIRST AID

4.1 Description of first aid

Inhalation	If breathing stops, perform artificial respiration and call for medical help immediately. In case of difficulty breathing, provide fresh air and call a doctor.
Contact with the eyes/skin	For burns caused by the arc, see a doctor. To remove dust or vapour, wash with water for at least 15 minutes. If the irritation persists, request medical assistance. For burns on the skin caused by the arc, wash immediately with cold water. Get medical assistance for burns or irritation that doesn't improve. To remove dust or particles, wash with neutral soap and water.
Electric shock	Disconnect and turn off. Use a non-conductive material to move the victim so they are no longer in contact with conductive parts or wires. If they are not breathing, start artificial breathing, preferably mouth to mouth. If they don't have a pulse, perform CPR. Call a doctor immediately.

4.2 Main symptoms and acute and delayed effects:

N.A.

4.3 Indication of all medical assistance and special treatments that must be provided immediately.

General: Ventilate the place and seek medical assistance.

5.- FIRE FIGHTING MEASURES

5.1 Extinguishing means:	No specific recommendations for extinguishing means. Welding arcs and sparks can set fire to combustible and flammable materials. Use the recommended means for the materials in question and the fire situation.
5.2 Specific hazards arising from the substance or mixture:	N.A.
5.3 Recommendations for fire fighting personnel:	Use protective breathing equipment, as the fumes and vapours can be dangerous.

6.- MEASURES IN THE EVENT OF ACCIDENTAL SPILLAGE

6.1 Personal precautions, personal protective equipment and emergency procedures:	See section 8.
6.2 Precautions in relation to the environment:	See section 13.
6.3 Methods and means of contention and cleaning:	Solid compounds must be collected and placed in a container. Liquids and pastes must be collected and placed in a container. Use personal protective equipment during operations.
6.4 Reference to other sections:	See section 8/13.

7.- HANDLING AND STORAGE

7.1 Precautions for safe handling:

Handle with care to avoid pricks and cuts. Use gloves when handling welding consumables. Protect the feet. Avoid exposure to dust. Do not ingest. Some people may develop an allergic reaction to certain materials. Keep all warning and identifying labels.

7.2 Safe storage conditions, including possible incompatibilities:

Keep in a dry place away from chemical substances such as acids and bases, as these could cause a chemical reaction.

7.3 Specific end uses:

Arc welding

8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

See section 8.2.

8.2 Exposure controls:

General Measures: Avoid exposure to welding fumes, radiation, projections, electric shock, hot materials and dust. Ensure sufficient ventilation and aspiration directly above the arc to eliminate fumes and gases from the welding environment. If this is not possible, use vents or another suitable alternative to ensure breathing protection. Keep the work area and protective clothing clean and dry. Train welders to avoid contact with electrical wires and isolate conductive parts. Regularly check the condition of the equipment and protective clothing.
Use industrial health monitoring equipment to ensure that exposure does not exceed the national limits.
Personal protective equipment: Use a mask with ventilation when working or welding in reduced spaces, or where the ventilation is not sufficient to keep the exposure values within the safety limits. Take special care when welding painted or coated materials, as coatings can give off hazardous substances. Use protection for the hands, face, eyes, ears and body.

9.- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Physical condition: solid.
Colour: variable.
Flammability: non-flammable.
Melting point: 1000-1800ºC.

10.- STABILITY AND REACTIVITY

10.1 Reactivity: Contact with strong acids or bases can generate gas.

10.2 Chemical stability: Stable under normal conditions.

10.3 Possibility of dangerous reactions: N.A.

10.4 Conditions that must be avoided: This product is only suitable for manual welding procedures.

10.5 Incompatible materials: N.A.

10.6 Hazardous decomposition products: When this product is used in a welding procedure, the hazardous substances given off include the products resulting from the volatilisation, reaction or oxidation of the materials listed in point 3 and those coming from the base material and its coating.
The quantity of fumes may vary depending on the welding parameters and dimensions of the rod, but does not exceed 5-10g/kg.

Substance	Fe	Mn	Si	Pb	Cu	Ni	Cr
Weight %	65	5	5	0.1	1	0.1	0.1

See the national exposure limits for the components of the fumes. A significant amount of chromium in the fumes may be hexavalent chromium, which has a very low exposure rate in some countries. Manganese has a low exposure limit in some countries that is easily exceeded.
Air contaminants in the area around the welding area can affect the process and influence the composition and quantity of fumes produced.

11.- TOXICOLOGICAL INFORMATION

11.1 Information on the toxicological effects:

The inhalation of welding fumes and gases can be dangerous to people's health. Classification of welding fumes is difficult due to the variety of base materials, coatings, procedures and air contamination. The International Agency for Research on Cancer (IARC) has classified welding fumes as possibly carcinogenic for humans (Group 2B).

Acute toxicity	Overexposure to welding fumes can lead to symptoms such as fever, dizziness, nausea and dryness or irritation of the nostrils, throat and eyes.
Chronic toxicity	Overexposure to welding fumes can affect pulmonary function. Prolonged inhalation of chromium compounds, above the limits of risk-free exposure, can cause cancer. Prolonged inhalation of chromium compounds above the exposure limits can cause cancer. Overexposure to manganese and manganese compounds above the limits of risk-free exposure can cause irreversible damage to the central nervous system, including the brain, with symptoms that may include difficulty speaking, lethargy, trembling, muscle weakness, psychological alterations and spastic gait.

12.- ECOLOGICAL INFORMATION

The materials and consumables can decompose either into their original elements or into the by-products resulting from the welding procedure. Although no testing has been performed, the components of the product are harmful to aquatic ecosystems and discharging into aquatic systems must be avoided, as well as accumulation on the ground.

13.- CONSIDERATIONS IN RELATION TO DISPOSAL

13.1 Methods for the treatment of waste:

Users should refer to the national and local regulations. Waste management must be carried out ensuring the correct labelling of the containers for subsequent recycling or treatment under controlled conditions and by an authorised management company.
Industrial waste code:

12 02 12 Welding waste (Q8)
16 01 18 Ferrous metals (Q1)
16 01 18 Non-ferrous metals (Q1)

14.- INFORMATION IN RELATION TO TRANSPORT

No international regulations or restrictions apply.

15.- REGULATORY INFORMATION

15.1 Specific regulations and legislation for the product in the area of health, safety and the environment:

Carefully read and understand the manufacturer's instructions, the safety rules of your company and the health and safety instructions on the label. Adhere to any local legislation. Take precautions for yourself and others during welding.
PRECAUTION: welding gases and fumes can be dangerous to people's health and can damage the lungs and other organs. Use appropriate ventilation.
ELECTRIC SHOCKS can kill. ELECTRIC ARC and SPARKS can damage the eyes and cause burns.
Use protection for your hands, head, eyes and body.

15.2 Evaluation of chemical safety:

No.

16.- OTHER INFORMATION

The information on this Material Safety Data Sheet is based on the technical data held by Chaves Bilbao S.L. and which it believes to be reliable. Given that the conditions of use are out of our control, we take no responsibility in relation to the use made of this information, nor do we guarantee this in any way neither implicitly nor explicitly. For more information, please contact Chaves Bilbao S.L.