

## 1 IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

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|-----|--------------------------------------|---|
| 1.1 | Identification of the product        | Welding wire and TIG rods with trade name:<br><b>70S-3 / 70S-4 / 70S-6/ RG45 / RG60</b><br>All (coppered / bronzed / extra) |
|     | Superficial finishing:               |   |
| 1.2 | Use of substance / preparation:      | Only for welding operations   |
| 1.3 | Company / undertaking identification | Inweld Corporation 3962 Portland Street Coplay, PA 18037  |
| 1.4 | Emergency telephone                  | 800-424-9300 (Chemtrec)   |

## 2 HAZARDS IDENTIFICATION

This product is normally not considered hazardous as shipped. Gloves should be worn when handling to prevent cuts and abrasions.

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| 2.1 | Classification of the substance or mixture: N.a.   |  |
| 2.2 | Label elements: N.a.   |  |
| 2.3 | Other hazards: Skin contact is normally no hazard but should be avoided to prevent possible allergic reactions |  |

Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.

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|-------------|--|
| Heat        | Spatter and melting metal can cause burn injuries and start fires.   |
| Radiation   | Arc rays can severely damage eyes or skin.   |
| Electricity | Electric shock can kill.   |
| Fumes       | Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Chronic 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, tremor, muscular weakness, psychological disturbances etc. |

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

Composition of the wire	Weight %	CAS #	EINECS #	Haz. Classification	IARC	NTP	Elenco OSHA
Cr	< 0,5	7440-47-3	231-157-5	No	-	-	-
Cu	< 0,5	7440-50-8	231-159-6	No	-	-	-
Fe	>90	7439-89-6	231-096-4	No	-	-	-
Mn	< 2	7439-96-5	231-105-1	No	-	-	-
Si	<1	7440-21-3	231-130-8	No	-	-	-

Evaluation according to the International Agency for Research on Cancer.  
 Classification according to the 11th Report on Carcinogens, published by the US National Toxicology Program.  
 Carcinogen listing according to OSHA / Hazard Classification according to Regulation (EC) No 1272/2008

## 4 FIRST AID MEASURES

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|----------------|---|
| 4.1            |   |
| Inhalation     | If breathing has stopped, perform artificial respiration and obtain medical assistance immediately<br>If breathing is difficult, provide fresh air and call a doctor  |
| Eyes           | To remove dusts or fumes flush with water for at least fifteen minutes. If irritation persists obtain medical assistance<br>Get medical attention for burns or irritations that persist.  |
| Skin           | For skin burns from arc radiation flush with cold water.<br>Get medical attention for burns or irritations that persist.  |
| Electric SHOCK | Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires.<br>If not breathing begin artificial respiration.<br>If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). Immediately call a doctor |
| 4.2            | Most important symptoms and effects, both acute and delayed: N.a.   |
| 4.3            | Indication of any immediate medical attention and special treatment needed: N.a.  |
| General:       | Move to fresh air and call a doctor   |

## 5 FIRE FIGHTING MEASURES

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|-----|--|
| 5.1 | Extinguishing media: No specific recommendations for welding consumables<br>Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation |
| 5.2 | Special hazards arising from the substance or mixture: N.a.  |
| 5.3 | Advice for firefighters: Wear self-contained breathing apparatus as fumes or vapors may be harmful.  |

## 6 ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures: refer to section 8
- 6.2 Environmental precautions: refer to section 13
- 6.3 Methods and material for containment and cleaning up: Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Use DPI during the operations.
- 6.4 Reference to other sections: refer to section 8 - 13

## 7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling: Handle with care to avoid stings and cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Keep all identification labels
- 7.2: Conditions for safe storage, including any incompatibilities: Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.
- 7.3 Specific use: Welding

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters: Refer to section 8.2.
- 8.2 Exposure controls: Engineering measures: Avoid exposure to welding fumes, radiation spatter, electric shock, heated materials and dust. Ensure sufficient ventilation to keep welding fumes and gases from breathing zone and general area. Keep working place and protective clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts. Check condition equipment on a regular basis. Use respirator or air supplied respirator when welding or brazing in a confined space, or where local exhaust or ventilation is not sufficient to keep exposure values within safe limits. Use special care when welding painted or coated steels. Wear hand, head, eyes, ear and body protection like welders gloves, helmet or face shield with filter lens, safety boots, apron, arm and shoulder protection. Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. The following limits can be used only as guidance. Unless noted, all values are for 8 hour time weighted averages (TWA).

Substance	CAS#	ACGIH TLV (mg/m3)	OSHA PEL (mg/m3)
Cr	7440-47-3	0,5	0,5
Cu	7440-50-8	1 (d&m) ; 0,2 (f)	1 (d&m), 0,1 (f)
Fe	7439-89-6	5**	10 (f)
Mn	7439-96-5	0,2 (f) - 0,1***	5 (ceil)
Si	7440-21-3	-	15* , 5**

Threshold Limit Values according to American Conference of Governmental Industrial Hygienists  
 \* Total dust; \*\* Respirable fraction; \*\*\* Inhalable fraction; (f) fume; (d) dust; (m) mist, (ceil) ceiling.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Informations about physical and chemical properties: Appearance: Solid, non-volatile with varying color. Melting point: >1000°C / > 1800°F
- 9.2 Other Informations: NA

## 10 STABILITY AND REACTIVITY

- 10.1 Reactivity: Contact with chemical substances like acids or strong bases could generate gas
- 10.2 Chemical stability: This product is stable under normal conditions
- 10.3 Possibility of hazardous reactions: N.a.
- 10.4 Conditions to avoid: This product is only intended for normal welding purposes
- 10.5 Incompatible materials: N.a.
- 10.6 Hazardous decomposition products: When this product is used in a welding process hazardous decomposition products would include those from the oxidation of the materials listed in section 3 and those from the base metal and coating. The amount of fumes generated from this product varies with welding parameters and dimensions of consumable but is generally no more than 5 to 10 g/kg. Fumes from this product contain compounds of the following chemical elements. The rest is not analysed according to available standards

Fume Analysis	Fe	Mn	Si	Pb	Cu	Ni	Cr
Weigth % less than	65	5	5	0,1	1	0,1	0,1

Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in Section 8.  
 A significant amount of the chromium in the fumes can be hexavalent chromium, which has a very low exposure limit in some countries. Manganese has a low exposure limit, in some countries, that may be easily exceeded.  
 Air contaminants around the welding area can be affected by the welding process and influence the composition and quantity of fumes and gases produced.

## 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects: Inhalation of welding fumes and gases can be dangerous to your health. The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (Group 2B).

**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. Prolonged inhalation of chromium compounds above safe exposure limits can cause cancer. 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, tremor, muscular weakness, psychological disturbances etc.

## 12 ECOLOGICAL INFORMATION

- 12.1 Toxicity: N.A.
- 12.2 Persistence and degradability: N.A.
- 12.3 Bioaccumulative potential: N.A.
- 12.4 Mobility in soil: N.A.
- 12.5 Result of PBT e vPvB: N.A.
- 12.6 Other adverse effects: N.A.

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

## 13 DISPOSAL CONSIDERATIONS

Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal and local regulations. Use recycling procedures if available

Industrial waste number:	12 01 13	Welding wastes (Q8)
	16 01 18	Ferrous metal (Q1)
	16 01 18	Non ferrous metal (Q1)

## 14 TRANSPORT INFORMATION

No international regulations or restrictions are applicable

## 15 REGULATORY INFORMATION

15.1: Safety, health and environmental regulations/legislation specific for the substance or mixture: 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 regulation. Take precautions when welding and protect yourself and others.

**WARNING:** Welding fumes and gases are hazardous to your health. **ELECTRIC SHOCK** can kill. **ARC RAYS** and **SPARKS** can injure eyes and burn skin. Using **DPI** during operations.

15.2. Chemical safety assessment: No

**Canada:** WHMIS classification: Class D; Division 2, Subdivision A  
Canadian Environmental Protection Act (CEPA): All constituents of this product are on the Domestic Substance List (DSL)

**USA:** Under the OSHA Hazard Communication Standard, this product is considered hazardous. This product contains or produces a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm).  
United States EPA Toxic Substances Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.

**Section 311 Hazard Class**

As shipped	Immediate
In use:	Immediate delayed

**EPCRA / SARA Title III Toxic Chemicals**

The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA 313 reporting

Component name	Disclosure threshold
Cr	1,0% concentrazione minima
Mn	1,0% concentrazione minima
Cu	1,0% concentrazione minima

**16 OTHER INFORMATION**

Because of new adjustments to some paragraphs the present safety data sheet has been corrected and it replaces the follow SDS:

SSP1 REV 4 DEL 2013, SSP 2 REV 4 DEL 2013, SSP 3 REV 4 DEL 2013, SSP 94 REV 1 DEL 2013, SSP 50 REV 2 DEL 2013, SSP 64 REV 5 DEL 2013  
SSP 48 REV 0 DEL 2013, SSP 11 REV 0 DEL 2013

References:

**U.S.A.** American National Standard Z49.1 "Safety in Welding and Cutting", ANSI/AWS F1.5 "Methods for Sampling and Analyzing Gases from Welding and Allied Processes", ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes", AWSF3.2M/F3.2 "Ventilation Guide for Weld Fume".  
American Welding Society, 550 North Le Jeune Road, Miami Florida, 33135.

OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954

American Conference of Governmental Hygienists, valori limite di soglia ed indici di esposizione biologica, 6500 Glenway Ave, Cincinnati, Ohio 45211, USA.

NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" published by the National Fire Protection Association

**U.K.** WMA Publication 236 and 237, "Hazards from Welding fume", The arc welder at work, some general aspects of health and safety", available from the manufacturer

**GERMANY:** Unfallverhütungsvorschrift BGV D1, "Schweißen, Schneiden und verwandte Verfahren"

**CANADA:** CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting and allied processes"

This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

The data supplied in this form are based on the information in our possession at the date of updating.

ITALFIL S.p.A. will assume no liability regarding the accuracy and completeness of the information.

All chemical products can in fact present unknown risks to health, safety and / or the environment, even in relation to the different operating conditions, and they must therefore be used with care.

For this reason we cannot guarantee that the risk described in this form are the only foreseeable risks.

The user must therefore satisfy himself as to the particular conditions under which it is intended to use it.

Moreover, it must be noted that the user is obliged to comply with all the legislative, administrative and regulatory provisions regarding the product and its use in terms of occupational hygiene and safety, and environmental protection, apart from the information given in this form, given purely as guidance.