

Material Safety Data

Product Name: Welding Electrodes

1. Identification of the Substance/Preparation and the Company/Undertaking

1.1. Product identifier

Substance or preparation trade name: Hardfacing solid welding wires for TIG/GTAW and MIG/GMAW.

APPLICATIONS:

For Stock No. 70435 Welding Electrodes, 2.0mm (2.5kg Pack)

70436 Welding Electrodes, 2.5mm (2.5kg Pack)

70437 Welding Electrodes, 3.2mm (2.5kg Pack)

98441 Welding Electrodes, 2.5mm (5kg Pack)

98442 Welding Electrodes, 3.2mm (5kg Pack)

98443 Welding Electrodes, 4.0mm (5kg Pack)

Material Safety Data

Material Safety Data

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses ARC Welding with TIG or MIG process

1.3. Details of the supplier of the safety data sheet

Draper Tools Ltd

Hursley Road
Chandlers Ford
Eastleigh
Hampshire
SO53 1YF

1.4. Emergency telephone number

Draper Helpline +44 (0) 2380 494344
Opening hours 8:30-17:00 Monday – Friday.

2: Hazards identification

2.1. Classification of the substance or mixture

Solid wires in the supplied form are not classified as hazardous.

When this product is used in a welding process the following hazards are most important:

Heat: Spatter and hot, or molten, metals can cause burns and start fires.

Fumes: Overexposure to welding fumes may result in dizziness, nausea, dryness or irritation of the nose, throat or eyes. Chronic overexposure may affect pulmonary function. Fume from this product contains substances that are suspected of being carcinogenic.

2.2 Label elements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

Material Safety Data

3. Composition/information on ingredients

3.2. Substances

Wire Composition	Weight % (Maximum)	CAS Number	EC Number	Hazard	TLV, mg/m ³
Mn	3	7439-96-5	231-105-1	-	0.2 (fume)
Ni	1	7440-02-0	231-111-4	R40, R43	1.5 (metal) 0.2 (insol)
Cr	10	7440-47-3	231-157-5	-	0.5 (metal)
Mo	9	7439-98-7	231-107-2	-	5 (sol)
Fe	95	7439-89-6	231-096-4	-	5 (oxide)
Nb	-	7440-03-1	231-113-5	-	10
Cu	1	7440-50-8	231-159-6	-	0.2 (fume)
W	2	7440-33-7	231-143-9	-	5 (insol)
V	2	7440-62-2	231-111-4	R36, R37, R38	0.05 (fume)
Si	4	7440-21-3	231-130-8	-	10

4: First aid measures

4.1. Description of first aid measures

General: Move to fresh air and call for medical aid.

Inhalation: If breathing is difficult provide fresh air and call doctor.

Eye: For radiation burns due to arc flash seek medical attention.

Skin: For radiation burns seek medical attention.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation No information available.

Symptoms and effects - Following skin contact No information available.

Symptoms and effects - After eye contact No information available.

Symptoms and effects - After ingestion No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

5: Fire-fighting measures

5.1. Extinguishing media

Material Safety Data

<u>Suitable extinguishing media</u>	ABC-powder Carbon dioxide (CO2) Foam Extinguishing powder
<u>Unsuitable extinguishing media</u>	Full water jet (electrical equipment)

5.2. Special hazards arising from the substance or mixture

No information available.

5.3. Advice for fire-fighters

Co-ordinate fire-fighting measures to the fire surroundings.

6. Accidental release measures

6.1 Personal precautions

For non-emergency personnel. Use personal protection equipment.
Provide adequate ventilation.

For emergency responders No information available.

6.2 Environmental precautions

No information available.

6.3. Methods and material for containment and cleaning up

Methods and material for containment No information available

Methods and material for cleaning up Use personal protection equipment
When brushing up or post weld cleaning.

6.4 - Reference to other sections

Disposal: see section 13

Personal protection equipment: see section 8

7. Handling and storage

7.1. Precautions for safe handling

Recommendation - No special technical protective measures are necessary.

Advices on general occupational hygiene No information available.

7.2. Conditions for safe storage, including any incompatibilities

Keep separate from chemical substances such as acids and strong bases which could cause chemical reactions..

Material Safety Data

8. Exposure Controls/Personal protection

8.1 Control parameters

Welding/brazing produces fumes that can affect human health and the environment; suitable evaluation should be carried out to assess the risk. The degree of risk is dependent on the fume composition, fume concentration and duration of exposure. The fume composition is dependent on consumable, material being welded, any coating on the base material (eg. paint or galvanizing), contaminants on the base material (eg. oil), welding process, and welding procedure. The risk from welding fumes should be eliminated by selection of: welding process, welding parameters, extraction and PPE. Ensure sufficient extraction at the arc to keep welding fumes and gases away from the welders breathing zone. Keep work area and protective clothing clean and dry. Insulate conductive parts and avoid contact with live electrical parts. If sufficient extraction cannot be provided suitable respiratory PPE should be worn. Personal protective equipment: face shield with protective lens, safety boots, gloves, helmet, overalls, apron, arm and shoulder protection. Fume control requirements (TLV, PEL etc) may vary per element as well as per country so local/national limits should be checked

8.2 Exposure controls

Appropriate engineering controls

Mechanical extraction :

Individual protection measures, such as personal protective equipment

Suitable protective clothing: flame proof overalls, gloves, welding mask and respiratory protection if extraction is not suitable.



9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Solid, odourless, non-volatile wire of metallic appearance (copper coated). Wires supplied either on spools/drums or as straight cut lengths.

Density ~7.8g/cm³ (typical value not part of specification).

Melting-solidification point ~1400-1550°C (typical value not part of specification).

9.2 - Other information

Employ safe lifting practices.

Material Safety Data

10. Stability and reactivity

10.1 - Reactivity

Contact with acids or strong bases could generate gaseous decomposition products. When this product is used in a welding process, decomposition products would include those from the volatilisation, reaction or oxidation of the materials in section 2; and those from the base material and any coating on the base material. Reasonably expected gaseous products when utilised with the MIG/GMAW or TIG/GTAW processes would include carbon oxides, nitrogen oxides and ozone. Particulate fume constituents would include metal oxides of eg. Fe, Cr, Ni etc.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature. Contact with acids or strong bases could generate gaseous decomposition products

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- No information available.

10.5 - Incompatible materials

- No information available.

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.

11. Toxicological information

11.1 - Information on toxicological effects

Acute toxicity

Inhalation of welding fumes are dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contamination and processes.

Skin corrosion/irritation

- Not classified

Serious eye damage/eye irritation

- Nickel is classified as a skin sensitiser and may cause sensitisation in susceptible individuals.

Respiratory or skin sensitisation

- Not classified

Germ cell mutagenicity

- Not classified

Carcinogenicity

- welding fume is classified as a Carcinogen.

Material Safety Data

Reproductive toxicity - Not classified

STOT-single exposure - Not classified

STOT-repeated exposure - Not classified

Aspiration hazard - Not classified

12. Ecological information

12.1. Toxicity

Welding consumables and materials could degrade 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.

- The substance/mixture does not full fill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

12.4 - Mobility in soil

- No information available.

12.5 - Results of PBT and vPvB assessment

- No information available.

12.6 - Other adverse effects

- No information available.

13 Disposal Considerations

13.1 - Waste treatment methods

Waste treatment methods - Dispose of waste according to applicable legislation.

Sewage disposal No information available.

Special precautions for waste treatment No information available

Community or national or regional provisions. No information available.

14. Transport information

Material Safety Data

No specific precautions or restrictions apply. Solid welding wires are not classified as dangerous goods for transport and have no UN number.

15. Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

<u>Substances REACH candidates</u>	None
<u>Substances Annex XIV</u>	None
<u>Substances Annex XVII</u>	None
VOC content	0 %

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

16. Other Information

SDS versions

Revision

Texts of the warning label

WARNING: Protect yourself and others. Read and understand this label
Take precautions when welding. Ask for your employer's safety practices which should be based on manufacturer's hazard data. Fumes and gases can be dangerous to your health. Arc rays can injure eyes and burn skin. Electric shock can kill. Read and understand the manufacturer's instructions and your employer's safety practices. Keep your head out of the fumes. Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and general area. Wear correct eye, ear and body protection. Do not touch live electrical parts See WMA publication 236 "Hazards from Welding Fumes" available from the manufacturer. DO NOT REMOVE THIS LABEL.

Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

Material Safety Data

Risk phrases

- R36: Irritation to eyes.
- R37: Irritation to respiratory system.
- R38: Irritation to skin.
- R40: Limited evidence of a carcinogenic effect.
- R43: May cause sensitisation by skin contact.

Health & Safety Executive, Guidance Note EH40 "Occupational Exposure Limits", published annually, HSE, UK.