

SAFETY DATA SHEET
Section 1 – Chemical Product and Company Identification

Product name: Tungsten Electrodes for Welding

Tel: 1-630-232-6421

Manufacturer: WELDING MATERIAL SALES, INC.

Address: 3940 Stern Ave
St. Charles IL 60174

Information in case of emergency

Fax: 1-888-733-1512

Tel: 1-800-424-9300

Email: sales@weldingmaterialsales.com

Section 2 – Hazards Identification
Classification of the substance or mixture
GHS Classification in accordance with UN GHS Rev.8

This product is not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Pictogram(s): Not applicable.

Signal word: Not applicable.

Hazard statements: Not applicable.

Precautionary statements: Not applicable.

Description of any hazards not otherwise classified

See section 11 for detailed health effects and symptoms.

Section 3 – Composition/Information on Ingredient

As manufactured article, which is formed to a specific shape or defined during manufacture.

This product belongs to copper-plated low-alloy steel gas shielded welding wire. It is used as alloy welding wire steel by CO₂ or argon-rich as protective gas, mainly used for gas shielded welding. Gas shielded welding is the use of an applied gas as an arc medium to protect the arc and weld zone arc welding.

Designation		Chemical Composition		Tip Color
		Impurities 0.1%		
ISO 6848	AWS A5.12	Oxide Additive, %	Tungsten, %	
WP	EWP	-----	≥99.95	Green
WL 15	EWLa-1.5	L aO ₂ : 1.30-1.70	≥97.80	Gold

WC20	EWCe-2	CeO ₂ : 1.80-2.20	≥97.30	Gray
WL10	EWLa-1	LaO ₂ : 0.80-1.20	≥98.30	Black
WL20	EWLa-2	LaO ₂ : 1.80-2.20	≥97.30	Sky-blue
WZ3	EWZr-1	ZrO ₂ : 0.15-0.50	≥99.10	Brown
WZ8		ZrO ₂ : 0.70-0.90	≥98.60	White
	EWG	LaO ₂ & CeO ₂ : 1.80-2.20	≥97.30	Pink

Ingredient	CAS No.
Tungsten (W)	7440-33-7
Cerium Dioxide	1345-13-7
Lanthanum Dioxide	1312-81-8
Zirconium Oxide	1314-23-4
Yttrium Oxide	1314-36-9

Section 4 – First Aid Measures

Skin contact:	Burns should be treated by a doctor.	Ingestion:	Contact a doctor if more than an insignificant amount has been swallowed.
Eyes contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Burns from radiation, see doctor	Most important symptoms and effects, both acute and delayed:	Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons.
Inhalation:	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.		

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media:	Use dry sand, dry chemical powder.
Special hazards arising from the chemical:	Hazardous metal or metal oxide fumes.
Special protective equipment for firefighters:	Firefighters must wear fire resistant protective equipment. Wear self-contained breathing apparatus.

Section 6 – Accidental Release Measures

For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

Personal precautions, protective equipment and emergency procedures:	General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Skin contact should be avoided to prevent possible allergic reactions.
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Environmental precautions: Try to prevent the material from entering drains or water courses.

Methods and materials for containment and cleaning up: Pick up/sweep up when material is cooling.

Section 7 – Handling and Storage

Handling: Preventive handling precautions: Ensure adequate ventilation for the welder and others. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to welding. Remove all flammable materials and liquids before welding.

General hygiene: Wash hands before breaks and immediately after handling the product.

Storage: Store welding consumables inside a room without humidity. Do not store welding consumables directly on the ground or beside walls. Store away from chemical substances like acids which could cause chemical reactions.

Section 8 – Exposure Controls, Personal Protection

Control parameters

Components with workplace control parameters:

Ingredient	CAS No.	OSHA PEL	ACGIH TWA	ACGIH STEL
Tungsten (W)	7440-33-7	–	5 mg/m ³	10 mg/m ³
Cerium Dioxide	1345-13-7	–	–	–
Lanthanum Dioxide	1312-81-8	–	–	–
Zirconium Oxide	1314-23-4	5 mg/m ³	5 mg/m ³	10 mg/m ³
Yttrium Oxide	1314-36-9	1 mg/m ³	1 mg/m ³	–

Monitoring Method: Data not available.

Engineering Control: General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits

Personal protective equipment:

Respiratory Protection: Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to welding.

Eyes Protection: Wear eye protection appropriate for welding.

Body Protection: Wear body protection which helps to prevent injury from radiation, sparks and electric shock.

Hands Protection: Wear eye protection appropriate for welding.

Other Protections: Wash hands before breaks and immediately after handling the product.

Section 9 – Physical and Chemical Properties

Appearance	Solid.	Lower explosive limit %(V/V):	Not available.
Odor	Odorless.	Vapor pressure	Not available.
Odor threshold	Not available.	Vapor density	Not available.
pH	Not available.	Relative density(water=1)	Not available.
Melting point/freezing point	Ca. 3400°C.	Solubility(ies)	Ca. 19.3.

Initial boiling point and boiling range	Ca. 5900°C.	Partition coefficient: n-octanol/water	Insoluble in water.
Flash point	Not available.	Auto-ignition temperature	Not available.
Evaporation rate	Not available.	Decomposition temperature	Not available.
Flammability	Not flammable.	Viscosity	Not available.

Section 10 – Stability and Reactivity

Stability:	Stable under normal temperature and pressure.	Hazardous Decomposition Products:	Will not decompose under normal condition.
Incompatible materials:	Strong acid, strong oxides.	Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	No data available.		

Section 11 – Toxicological Information

Acute Toxicity:	No data available.	Other hazard:	
Sub-acute and Chronic Toxicity:	No known significant effects or critical hazards.		Welding fumes, if inhaled, can potentially produce several different 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 and welding process, all of which affect fume quantity and composition, as well as the use of adequate ventilation, respirators, or breathing equipment as circumstances require.
Skin corrosion/irritation:	No known significant effects or critical hazards.		Inhalation of the fumes/gases produced during welding may lead to irritation to the nose, throat and eyes.
Serious eye damage/eye irritation:	No known significant effects or critical hazards.		Tungsten
Sensitization:	No known significant effects or critical hazards.		Any fume or dust given off by these electrodes will consist mainly of tungsten and tungsten oxides. Exposure to tungsten and its compounds as a dust or fume generally shows low toxicity with no long term fibrotic effects on the lung.
Mutagenicity:	No known significant effects or critical hazards.		
Carcinogenicity:	No known significant effects or critical hazards.		
Reproductive Toxicity:	No known significant effects or critical hazards.		

Section 12 – Ecological Information

Ecotoxicity:	No data available.	Bioconcentration or biological accumulation:	No data available.
Biodegradable:	No data available.	Other harmful effects:	Try to prevent the material from entering drains or water courses.
Non-biodegradable:	No data available.		

Section 13 – Disposal Considerations

Waste information:	Firstly should consider the recovery or recycling as possible. Disposal must be made according to local and national regulations.
Disposal notice:	Disposal area must comply with the environment and national safety standard.

Section 14 – Transport Information

UN Number: ADR, IMDG, IATA	Not regulated as dangerous goods.	Packing group: ADR, IMDG, IATA	Not regulated as dangerous goods.
UN proper shipping name: ADR, IMDG, IATA	Not regulated as dangerous goods.	Environmental hazards:	No.
Transport hazard class(es): ADR, IMDG, IATA	Not regulated as dangerous goods.	Special precautions for user:	No information available.

Section 15 – Regulatory Information

This safety data sheet complies with the requirements of UN GHS Rev.8, Regulation (EC) No 1272/2008 and OSHA Hazard Communication Standards (29 CFR 1910.1200).

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

No information available.

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

California Proposition 65:

WARNING: This product may expose you to chemicals including [Cobalt (II) Oxide, Titanium dioxide (airborne, unbound particles of respirable size), Chromium (hexavalent compounds), Nickel, Lead and Lead Compounds, Carbon Black, Cadmium, Beryllium and Beryllium Compounds] which are known to the State of California to cause cancer, and [Chromium (hexavalent compounds), Nickel, Lead and Lead Compounds, Cadmium] which are known to the State of California to cause birth defects and/or other reproductive harm. For more information go to <https://www.p65warnings.ca.gov/>

Section 16 – Additional Information

The customer should provide this Safety Data Sheet to any person involved in the materials use or further distribution. Welding Material Sales requests the users (or distributors) of this product to read this Safety Data Sheet carefully before usage. The information contained in this Safety Data Sheet relates only to the specific materials designated and may not be valid for such material used in combination with any other material or in any other process. Welding Material Sales believes that the information contained in this (SDS) Safety Data Sheet is accurate. However, Welding Material Sales does not express or imply any warranty with respect to this information. The product is supplied on the condition that the user accepts the responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. Freedom from patent rights must not be assumed.