



SAFETY DATA SHEET

Version No.: 2

POWERMIG ES-6

Section 1. IDENTIFICATION OF THE HAZARDOUS CHEMICAL AND OF SUPPLIER

1.1 Product identifier

Trade name : POWERMIG ES-6
Article-no : -

1.2 Other means of identification

: -

1.3 Recommended use of the chemical and restriction on use

Use : Gas Metal Arc Welding

1.4 Details of principal suppliers (including name, address, phone number, etc.)

Supplier : Leeden Powerweld Sdn. Bhd.
Street address : 168, Kawasan Perindustrian Ayer Keroh,
75450 Melaka
Telephone : +606 – 232 3288
Fax : +606 – 232 3200
Email : info@power-weld.com
Website : www.power-weld.com

1.5 Emergency phone number

Emergency phone number : +606 – 232 3288

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance / mixture and any nation or regional information

Classification according to Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

2.2 Label elements

Pictogram : Not Applicable

Signal word : Not Applicable

Hazard Statement(s) : Not Applicable

Precautionary Statement(s) : P261 Avoid breathing fume/gas
P280 Wear protective gloves/protective clothing/eye protection/face protection
P304 + P340 IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing
P337 + P313 If eye irritation persists: Get medical advice/attention
P233 + P403 Keep container tightly closed. Store in a well-ventilated place

2.3 Other hazards which do not result in classification or are not covered by the Regulations

: During welding process : Overexposure to welding fumes can be dangerous to health
Watch out for splatter, hot metal and slag. It may cause skin burn and cause fire
Arc rays can injure eyes and burn skin. Electric shock can kill. Avoid touching live electrical parts



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Section 3. COMPOSITION AND INFORMATION OF THE INGREDIENTS OF THE HAZARDOUS CHEMICAL

3.1 Substances

This product is a mixture and please refer to Section 3.2

3.2 Mixtures

<u>Core Ingredient</u>	<u>C</u>	<u>Si</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Cu</u>	<u>Fe</u>
Typical	0.06%	0.84%	1.43%	0.007%	0.011%	0.011%	97.5%

Section 4. FIRST-AID MEASURES

4.1 Description of first aid measures

- 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
- Skin contact : IF SKIN BURN. Affected area to be treated by a doctor.
- Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Ingestion : IF SWALLOWED. Call a physician.

4.2 Most important symptoms and effects, acute and delayed

- Inhalation : Inhalation of vapour may cause irritation of the respiratory system in susceptible persons.

4.3 Indication of any immediate medical attention and special treatment needed, if necessary

- : Not applicable

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media : Carbon dioxide (CO₂), powder or diffuse jet of water.
In case of major fire: Extinguish fire with diffuse jet of water or foam

5.2 Specific hazards arising from the chemical

- : Not applicable

5.3 Special protective equipment and precautions for fire-fighters

- : Wear self-contained breathing apparatus

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- : Mechanical ventilation and local exhaust ventilation must be adequate to keep fume concentrations within safe limits. Use respiratory equipment when welding in a confined space. Wear eye and skin protection plus protective clothing appropriate to welding.

6.2 Environmental precautions

- : Try to prevent the material from entering drains or water courses

6.3 Methods and material for containment and cleaning

- : Sweep up the floor



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Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- Preventive handling precautions : Ensure adequate ventilation for the welder and others. Use respiratory equipment when welding in a confined space. Wear eye and skin protection plus protective clothing appropriate to welding. Remove all flammable materials and liquids before welding
- General hygiene : Wash hands before breaks.

7.2 Conditions for safe storage, including any incompatibilities

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

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

- Welding Fumes (NOC) : PEL - 8hr TWA = 5 mg/m³

8.2 Appropriate engineering controls

- : Mechanical ventilation and local exhaust ventilation must be adequate to keep fume concentrations within safe limits

8.3 Individual protection measures, such as personal protective equipment

- Eye / face protection : Wear welding shield
- Skin protection : Wear welding glove
- Respiratory protection : Use respiratory equipment when welding in a confined space, for example N95 Dust Mask or half face respirator with filter

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Appearance : Copper coated solid welding wire
- Form : Solid
- Odour : Odourless
- Odour threshold : Not applicable
- pH : Not applicable
- Melting point / Freezing point : > 1500 °C
- Initial boiling point and boiling range : Not applicable
- Flash point : Not applicable
- Evaporation rate : Not applicable
- Flammability (solid gas) : Not applicable
- Upper / lower flammability or explosive limits : Not applicable
- Vapour pressure : Not applicable
- Vapour density : Not applicable
- Relative density : Not applicable
- Solubility(ies) : Immiscible
- Partition coefficient: n-octanol / water : Not applicable
- Auto-ignition temperature : Not applicable
- Decomposition temperature : Not applicable
- Viscosity : Not applicable
- Specific Gravity : Not applicable



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Section 10. STABILITY AND REACTIVITY

- 10.1 Reactivity : Not applicable
- 10.2 Chemical stability : Stable at normal conditions.
- 10.3 Possibility of hazardous reactions : Not applicable
- 10.4 Conditions to avoid : None under normal conditions
- 10.5 Incompatible materials : Not applicable
- 10.6 Hazardous decomposition products : Welding fumes and gases

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Conditions to avoid: none in the form supplied

Overexposure to welding fumes can be dangerous to health, can cause dizziness, nausea and irritation to nose, throat or eyes

- Acute Toxicity : Not applicable
- Skin Corrosion / Irritation : Not applicable
- Serious Eye Damage or Eye Irritation : Not applicable
- Respiratory Sensitization : Not applicable
- Skin Sensitization : Not applicable
- Germ Cell Mutagenicity : Not applicable
- Carcinogenicity : Not applicable
- Reproductive Toxicity : Not applicable
- Specific Target Organ Toxicity - Single Exposure : Not applicable
- Specific Target Organ Toxicity - Repeated Exposure : Overexposure to welding fumes can be dangerous to health, can cause dizziness, nausea and irritation to nose, throat or eyes
- Aspiration Hazard : Not applicable



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Section 12. ECOLOGICAL INFORMATION

- 12.1 Ecotoxicity : The welding process can affect the environment if welding fume is released directly into the atmosphere. Residues from welding consumables could degrade and accumulate into soils and ground water.
- 12.2 Persistence and degradability : Not applicable
- 12.3 Bio accumulative potential : Not applicable
- 12.4 Mobility in Soil : Not applicable
- 12.5 Other adverse effects : Not applicable

Section 13. DISPOSAL INFORMATION

Disposal Information : Dispose of any product, residue, filter or packing material according to national and local regulations.

Section 14. TRANSPORTATION INFORMATION

- 14.1 UN number : Not applicable
- 14.2 UN proper shipping name : Not applicable
- 14.3 Transport hazard class (es) : Not applicable
- 14.4 Packing group, if applicable : Not applicable
- 14.5 Environmental hazards : Not applicable
- 14.6 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code) : Not applicable
- 14.7 Special precautions : Not applicable

Section 15. REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture. : Classification according to Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013



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Section 16. OTHER INFORMATION

16.1 Date of preparation of the SDS : 18 August 2016

16.2 Date of revision of the SDS : 25 November 2020

16.3 Version : 2

16.4 Key literature reference and sources for data used to compile the SDS

- : MS ISO 4850: 2003: Personal Eye-protectors for Welding & Related Techniques – Filters – Utilisation & Transmittance Requirements
- : Factories and Machinery Act 1967 (Act 139) Rules and Regulations
- : Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013
- : Industry Code Of Practice on Chemicals Classification and Hazard Communication 2014
- : Occupational Safety and Health (Use and Standard of Exposure of Chemicals Hazardous to Health) Regulations 2000
- : SDS from Sigma-Aldrich (M) Sdn. Bhd.

16.5 Key / legend to the abbreviations and acronyms used in the SDS

- SDS : Safety Data Sheet
- PEL : Permissible Exposure Limit
- TWA : Time Weighted Average

16.6 Other information deems necessary by a supplier

- : The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality.

The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.