

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : **ALUMINIUM WELDING ALLOYS**

REV.01.04.08

SAFRA

HEALTH AND SAFETY INFORMATION DATA SHEET

ON

ALUMINIUM ALLOYS WELDING WIRE



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1. PRODUCT/CONSUMABLES

1.1 SAFRA aluminium alloys is used for the MIG and TIG welding of aluminium, and aluminium alloys, conforming to the International Standard.

1.2 PRODUCER/ SUPPLIER

1.2.1 Company SAFRA

I. 25039 TRAVAGLIATO (BS) ITALY

telephone : 030 - 6863241 telefax : 030 -6863246

1.2.2 Emergency telephone : 030 - 6863241

2. INFORMATION AND COMPOSITION OF THE PRODUCTS.

2.1 Aluminium alloys welding wire or rods.

2.1.2 Substance, compositions see the appendix 1.

3. HAZARDS IDENTIFICATIONS AND INFORMATION

3.1 Not welded: The products are dense materials and even small cartons are relatively heavy.

They should not therefore be left in a position where physical injury or accident could be caused. Care should be taken in lifting and handling.

3.1.1 If not welded: Skin contact does not normally present a hazard, though it is always possible that occasionally individuals may be found who are allergic to substances usually regarded as inert. However we do not know of any case in which welding consumables have been identified as the cause of allergenic response.

3.1.2 Hazards during the welding: The recommended Limit on the concentration of welding fume (or other atmospheric contaminants) in the air breathed by any person is defined by the Health and Safety Executive in a List of Occupational Exposure Limits (OEL), Guidance Note EH40. This guidance note is revised annually and reference should always be made to the most recent edition. A long exposure Limit (8 hour Twa value) of 5mg/m³ for particulate welding fume is included in the current OEL Recommended Limits List.

Overexposure to magnesium oxides fumes may cause metal fume fever. Temporary symptoms can include fever, chills, nausea, vomiting, and muscular pain.

Exposure to magnesium metal or oxide dust should be a low health risk by inhalation and should be treated as a nuisance dust.

Overexposure to manganese oxide fumes may cause metal fume fever. Chronic overexposure to manganese dust or fumes may cause nervous system disorders, (e.g, manganism) pneumonitis and fibrosis of lung tissue.

Aluminium dust/fine and fumes are a low health risk by inhalation. For standard operations (milling, cutting , grinding), aluminium should be treated as a nuisance dust as defined by the ACGIH.

Welding aluminium, and arc spray metallizing can generate ozone, overexposure to ozone can result in mucous membrane irritation as well pulmonary changes including irritation, congestion, and edema. Welding fumes have been defined as possibly carcinogenic to humans by the IARC (Group 2B).

Nitric oxide is a severe eye, skin, and muscous menbrane irritant, it may cause formation of methemoblobin and subsequent action on the central nervous system.

4. FIRST-AID MEASURES.

4.1 By fume and gas emissions. The hazards to health when they are inhaled or swallowed, contact your medical department.

4.1.1 EYES: Flush eyes with plenty of water for at least 15 minutes. Consult your doctor if irritation persists.

4.1.2 SKIN : Wash with soap and water for at least 15 minutes. Consult your doctor if irritation persists.

5. FIRE - FIGHTING MEASURES

5.1 Aluminium welding wire are not inflammable under ordinary conditions and do not present a fire or explosion risk.

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5.1.1 Packaging could be inflammable and the usual precautions to prevent the fire should be observed. Welding consumable should not be allowed to come into contact with acids or other substances which are corrosive to metals or with oxidising agents nor with any other chemical substances with which any reaction may occur.

6. ACCIDENTAL RELEASE MEASURES

6.1 The welders should wear the normal protective clothing and eye protection appropriate to electric arc welding, made of approved material.

Glovers should be soft and pliable and should have gauntlets long enough to protect the wrists and lower arms.

7. HANDLING AND STORAGE

7.1 No special precautions need to be used in handling these welding rods or wire in both storage and handling.

7.1.1 Avoidance of contact with incompatible materials see section 5. p. 5.1.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Welders should wear the normal protective clothing and eye protection appropriate to electric arc welding, and arc spray metallizing.

Use adequate ventilation and fume extraction system to meet exposure limits listed in Appendix 2.

9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Form of the product: Wire diam. 0,80 to 3,20 mm and
Rods diam 1,60 to 6,00 mm lenght 1000 mm.**

9.1.1 Melting point : 570 to 660° c.

9.1.2 Color : Silvery

9.1.3 Solubility in water : None

9.1.4 Odor : None

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10. STABILITY AND REACTIVITY

10.1 These welding wire and rods are not inflammable under ordinary conditions and not present a fire or explosion risk.

10.1.2 Welding wire and rods should not be allowed to come into contact with acids or other substances which are corrosive to metals or oxidising agents nor with any other chemical substances with which any reaction may occur.

11. TOXICOLOGICAL INFORMATION

11.1 The aluminium alloy solid wire and rods are not toxic.

12. ECOLOGICAL INFORMATION

12.1 For the aluminium alloy solid wire and rods, you have to follow your local ecological regulations.

13. DISPOSAL CONSIDERATIONS

13.1 For the aluminium alloy solid wire and rods (waste from residues) you have to follow your local regulations for metallrecycling.

14. TRANSPORT INFORMATIONS

14.1 Aluminium alloy solid and rods is not consider as dangerous goods by:

RID/ ADR / Dot 49CFR/ ADNR/ IMDG/ ICAO-TI / IATA-DGR

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15. REGULATORY INFORMATION.

15.1 EUROPEAN COMMUNITY : All components are listed on European Core inventory (ECOIN).

CANADIAN DOMESTIC SUBSTANCES LIST.

U.S. FEDERAL Regulations : Safety and Health standards, 29 CFR 1910, available from U.S. Government printing office, Washington, D.C. 20402-0001.

16. OTHER INFORMATIONS.

16.1 LEGEND:

- **RID =** Regulations concerning the international carriage of dangerous good by rail.
- **ADR =** European agreement concerning the international carriage of dangerous goods by road.
- **DoT49CFR =** U.S. Department of transportation 49 code of Federal Regulations.
- **ADNR =** Regulations concerning the carriage of dangerous goods on the Rhine.
- **IMDG code =** International Maritime Dangerous Goods Code.
- **ICAO -TI =** International Civil Aviation Organization - Technical Instructions.
- **IATA-DGR =** International Air Transport Association – Dangerous Goods Regulations.

- **ACGIH =** American Conference of Governmental Industrial Hygienists.
- **CAS =** Chemical Abstract Service.
- **CERCLA =** Comprehensive Environmental Response, Compensation, and Liability Act.

- **CFR =** Code of Federal Regulations.
- **DSL =** Domestic Substances List (Canada)
- **EINECS =** European Inventory of Existing Commercial Chemical Substances.
- **EPA =** Environmental Protection Administration.
- **TCLP =** Toxic Chemicals Leachate Program.
- **IARC =** International Agency for Research on Cancer.
- **NIOSH =** National Institute for Occupational Safety and Health.
- **NTP =** National Toxicology Program.
- **OSHA =** Occupational Safety and Health Administration.
- **PEL =** Permissible Exposure Limit.
- **STEL =** Short Term Exposure Limit.
- **TLV =** Threshold Limit Value.
- **TSCA =** Toxic Substances Control Act.

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