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|---|-----------------------------------|----------------|-----------------|---|
|  | Material Safety Data Sheet | | |  |
| | Austinox 307 | Austinox 307Si | Austinox 308L | |
| | Austinox 308LSi | Austinox 309L | Austinox 309LSi | |
| | Austinox 310 | Austinox 312 | Austinox 316L | |
| | Austinox 316LSi | Austinox 317L | Austinox 318Si | |
| | Austinox 347Si | Austinox 385 | Austinox 2209 | |

1. Product identification

Brand: **AUSTINOX**
Designations : **TIG/MIG/SAW 307, 307Si, 308L, 308LSi, 309L, 309LSi, 310, 312, 316L, 316LSi, 317L, 318Si, 347Si, 385, 2209**
Product type : **Stainless Steel Wire for GMAW, GTAW, SAW Arc Welding processes**
Supplier : **SADEV Group / 2 allée des Faisans 74600 SEYNOD**
Tel +33 (0)450 33 70 72 Fax +33 (0) 450 33 70 38

2. Identification of hazards

The identified hazards are those which could occur during welding operations :

Product related hazards :

- Fumes & gases: Their composition varies with the type of filler metal and base metal on which it is applied (composition, contamination). Iron and Manganese oxides can be emitted. Also, the electric arc can generate Nitrogen Dioxide release.

Other hazards :

- Projections of molten metal, burns due to contact with hot metallic components.
- Emission of UV rays which could induce eye damage.
- Risks of electric shocks or magnetic field exposure related to the welding equipments used (see their specific technical data sheets)

3. Product Composition

Type : Material : solid wire in spools, coils or sticks



Main chemical components (proportions vary within the ranges depending on grade):

| Element | Ranges (%) | N° CAS | N°CE |
|--------------|-------------|-----------|-----------|
| Iron: | Base | 7439-89-6 | 231-096-4 |
| Chromium | 17 - 30 % | 7440-47-3 | 231-157-5 |
| Nickel : | 8 - 25 % | 7440-02-0 | 231-111-4 |
| Manganese : | 1 - 3 % | 7439-96-5 | 231-105-1 |
| Silicium : | 0.3 - 1 % | 7440-21-3 | 231-130-8 |
| Molybdenum : | 0.3 – 3.5 % | 7439-98-7 | 231-107-2 |
| Copper : | < 2.0 % | 7440-50-8 | 231-159-6 |

4. First Aid

In case of malaise or suffocation directly linked to fumes generated by welding, due to insufficient aspiration, ventilation or lack of individual respiratory protection, provide the patient with plenty of fresh air, follow the mandated first aid procedures and quickly consult a physician.

Burns(by contact or projection of molten metal) : apply standard first aid procedures for such injuries.

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5. Fire hazards

Nonflammable product but packaged in cardboard or plastic boxes. All types of fire extinguishers can be used in normal conditions. Refer to specific field or workshop safety instructions for fires occurring on welding equipment.

6. Measures for accidental dispersion

Personal protection : none

Protection from environment : no specific instruction

Procedure for cleanups : Gathering & disposition as per paragraph 13 hereafter.

7. Précautions for stocking or safe handling of product

Safe handling : No specific instructions: However, exert caution vis-à-vis open packages to avoid risk of falling products.

Incompatible products : Not applicable

Packing material : No specific instructions, see items 5,6 & 13.

8. Prevention exposition / protection of workers

Exposition to the product : Not applicable

Exposition to fumes, projections ou UV radiation during welding operations :

Protection of personnel :

- Respiratory protection : Need for enough ventilation and for respiratory mask
- Hand protection : Wear adequate gloves
- Eye protection : Use face shield with filtered lens . Provide protected screens & flash goggles
- Skin/body protection : Use protective work clothing and adequate shield .

The following components may be released during welding operations :

| Description | TLV values | CAS-N° |
|-----------------------------|---------------------------------|------------|
| Manganese and its compounds | 0.2 mg/m ³ | 7439-96-5 |
| Nickel metal | 1.5 mg/m ³ (inhaled) | 7440-02-0 |
| Nickel compounds | 0.1 mg/m ³ (inhaled) | 1313-99-1 |
| Chromium / metal & Cr3 | 0.5 mg/m ³ | 7440-47-3 |
| Chrome Cr6 | 0.01mg/m ³ | 18540-29-9 |
| Niobium & compounds | no set limit | 7440-03-1 |
| Ozone | 0,05 ppm | 10028-15-6 |
| Nitrogen Dioxide | 3 ppm | 10102-44-0 |



Exposure limits per TLVs / ACGIH – 2011 edition (which can be revised permanently)

9. Physical data

Shape : Wire or 1 m cut sticks, diameter 0.6 to 4.0 mm

Color : Bright metallic appearance

Odor : none

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Melting point : 1400 to 1500°C

Non-flammable , non-water soluble product

Density : 7.90

Other information paragraph 9.2 - II 1907 2006 CEE : Not applicable

9. Stability & reactivity

Stable product, no decomposition in air or water

Avoid contact with acidic or basic products (risk of possible gaseous emissions)

10. Health hazard information

Information pertaining to the substances identified in paragraph 8.

- Chromium : Irritation of skin & respiratory tracts
- Chromium compounds : Irritants et carcinogens
- Nickel compounds : pulmonary carcinogens
- Manganese & compounds : can induce troubles of central nervous system .
- Niobium & compounds : respiratory & eye irritations
- Ozone : respiratory troubles
- Nitrogen Dioxyde : respiratory irritations

11. Environmental information

No known danger for the environment.

12. Disposition of various wastes

Classification of wastes :

- Wire bits / scraps : 12.01.03 (scrap of ferrous metals)
- Packagings : 15 01 0 / cardboard packaging, 15 01 02 / plastic packaging

Wastes must be disposed of in full compliance with all applicable regulations (local, national) and with maximum use of recycling.

13. Information pertaining to transport

Non hazardous material, no known limitations vis-à-vis transport..

14. Labelling

Pure Nickel is classified R40, R43. All alloys containing more than 1% Nickel are classified the same way per regulation 1907/2006/CEE. However, the commercialized form (massive metal) is recognized as non-hazardous , thus no specific labelling is required .