



Safety Data Sheet

Cromarod 316L

SMAW Stainless Steel Electrode

Art. no: 7440-XXXX

Elga rev. date: 2009-11-23

Customer rev. date

(printing date):

1. Product and Company identifications

Product name: Cromarod 316L
Application: Arc welding
Classification(s): EN 1600/ISO3581-A: E 19 12 3 L R 12
AWS A5.4: E316L-17
Supplier: Elga AB
Address: Box 277, SE-433 25 Partille, Sweden
Telephone: +46 31 7264600
Fax: +46 31 7264700
Internet: www.elgawelding.com

2. Hazards identification

This product contains nickel that is classified as both a potential skin allergen and an element with limited evidence of a carcinogenic effect according to EC Directive 67/548/EEC.

Avoid eye contact or inhalation from dust. Skin contact is normally no hazard but should be avoided to prevented from allergic reactions.

When the product is used in the welding process the most important hazards are; *Heat*: spatter, hot metal and slag can burn skin and cause fire. *Radiation*: arc rays can injure eyes and burn skin. Electric shock: can kill. *Dust*: can cause irritation to eyes and lungs. *Fume*: overexposure to fumes and gases can be dangerous to health.

3. Composition

| Ingredients coating components | Weight% | CAS No | EINECS# | H-symbol | R-phrases |
|--------------------------------|---------|-----------|-----------|----------|-----------|
| Iron | 0-5 | 7439-89-6 | 231-096-4 | n/a | n/a |
| Nickel | 2-20 | 7440-02-0 | 231-111-4 | Xn | R40/R43 |
| Chromium | 5-30 | 7440-47-3 | 231-157-5 | n/a | n/a |
| Manganese | 2-30 | 7439-96-5 | 231-105-1 | n/a | n/a |
| Molybdenium | 0-10 | 7439-98-7 | 231-107-2 | n/a | n/a |
| Fluorides (as F) | 5-25 | 7789-75-5 | 232-188-7 | n/a | n/a |

Xn=Harmful, R40=Possible risks of irreversible effects, R43=May cause sensitisation by skin contact. The balance is a mixture of rutile, calcium carbonate and other minerals.

4. First aid measures

Inhalation: if breathing is difficult, provide fresh air and call a doctor.

Burns: for skin burns from radiation, see doctor. Eye injuries: for radiation burns (arc flash), see doctor; for dust irritation rinse eyes with eyewash solution

5. Fire fighting measures

No specific requirements applicable.

6. Accidental release measures

Personal: see section 8. Environmental precautions: see section 13. Methods for cleaning up: see section 13.

7. Handling and storage

No specific safety precautions necessary in the form supplied.

8. Exposure controls/personal protection

Engineering measures: General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits for both the welder and others.

Personal protection: Use respiratory protective equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Avoid touching live electrical parts.

Following table indicate which components that might need exposure control due to handling of the named product.

| Component | CAS No | WEL g/m3 (1) | NGV mg/m3 (2) |
|-----------|-----------|--------------|---------------|
| Iron | 7439-89-6 | 5(f) | 3,5(f) |

| | | | |
|------------------|-----------|--------|-------------|
| Nickel | 7440-02-0 | 0,5 | 0,5* |
| Chromium | 7440-47-3 | 0,5(d) | 0,5* |
| Manganese | 7439-96-5 | 0,5 | 0,2*, 0,5** |
| Molybdenium | 7439-98-7 | 10 | 10*, 5** |
| Fluorides (as F) | 7789-75-5 | 2,5(F) | 2(F) |

(1) COSHH doc EH40 Workplace Exposure Limits, 8h TWA

(2) AFS 2007:2

*Total dust / **Respirable fraction / Inhalable fraction as (f) fume, (d) dust, (m) moist / (c) ceil

9. Physical and chemical properties

Physical state: Solid
 Odour: Odourless
 Colour: Grey
 Form: Core wire with extruded coating

10. Stability and reactivity

Conditions to avoid: n/a

Hazardous decomposition products: welding fumes and gases. Additional fume may arise from coatings and contaminants on the base material.

Fume analysis: wt %

| Fe | Mn | Ni | Cr | Cu | Pb | F |
|-----|-----|---------|-----|------|------|------|
| 4-6 | 3-5 | 0.2-0.6 | 4-6 | <0.1 | <0.1 | 0-10 |

Cr is partly present as Cr(VI)

Refer to applicable national exposure limits for welding fume and its compounds.

11. Toxicological information

No effects in the form supplied. When welding, fumes and gases generated can be dangerous to health. Short-term overexposure can cause dizziness, nausea and irritation of the nose, throat or eyes. Long-term overexposure may affect the lungs. Overexposure to manganese may affect the nervous system. Certain chromium and nickel compounds, like Cr(VI) are suspected of being cancercausing agents.

12. Ecological information

The welding process can effect the environment if fume is released directly into the atmosphere.

Cr(VI) is suspected of being very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Residues from welding consumables could degrade and accumulate into soils and ground water.

13. Disposal considerations

Dispose of any product, residue or packing material according to national and local regulations. Use recycling procedures if available.

Spent fume extraction filters shall be disposed of as dangerous waste.

14. Transport information

No special precautions apply.

15. Regulatory information

Local laws and regulations should be carefully observed.

According to EC directive 88/379/EEC this product is classified with the following risk and safety phrases due to its content of nickel

Xn



Harmful

R-phrases

R40 Limited evidence of a carcinogenic effect.

R43 May cause sensitisation by skin contact.

S-phrases

S2 Keep out of reach for children

S22 Do not breath dust

S36 Wear suitable protective clothing

16. Other information

Elga requests the users of this product to read this Safety Data Sheet carefully and become aware of hazards implied and the Safety information. The customer should provide this Safety Data Sheet to any person involved in its use or further distribution.

This Safety Data Sheet complies with Regulation (EC) No 1907/2006 and ISO 11014 and is based on present knowledge and regulations.

This information is to be considered as a general guidance.