



Safety Data Sheet

Cromarod 312

SMAW Stainless Steel Electrode

Part no: 7438- XXXX

Date: 2005-05-30

1. Product and Company identifications

Product name: Cromarod 312
Application: Arc welding
Classification(s): EN 1600-97 E 29 9 R 32
AWS A5.4-92 -E 312-17
Supplier: Elga AB
Address: Box 277, SE-433 25 Partille, Sweden
Telephone: +46 31 7264600
Fax: +46 31 7264700
Internet: www.elgawelding.com

2. Composition/Information on coating ingredients

Ingredient	Weight%	Cas No	H-symbol	R-phrases
Iron	0-5	7439-89-6	n/a	n/a
Nickel	2-20	7440-02-0	Xn	R40/R43
Chromium	5-30	7440-47-3	n/a	n/a
Manganese	2-30	7439-96-5	n/a	n/a
Molybdenum	0-10	7439-98-7	n/a	n/a
Fluorides (as F)	5-15	7789-75-5	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.

3. 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 prevent 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.

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.

The long-term exposure limit for Cr(VI) is 0.05 mg/m³.

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.

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 different base materials, 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 cancer-causing agents.

12. Ecological information

The welding process can affect 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



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 breathe dust
S36 Wear suitable protective clothing

In case of insufficient ventilation wear suitable respiratory equipment.

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.