



SAFETY DATA SHEET

Cromarod 316L

LANDVÉLAR

Version number: 2

Replaces SDS: 2013-03-11

Issued: 2016-03-31

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name Cromarod 316L

Article No. 7440-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product type SMAW Stainless Steel

Use Arc welding

1.3 Details of the supplier of the safety data sheet

Supplier Elga AB

Street address Box 277
433 25 Partille
Sverige

Telephone 031 726 46 00

Fax 031 726 47 00

Email sds@elga.se

Web site www.elgawelding.com

Email sds@elga.se

1.4 Emergency telephone number

Available outside office hours Yes

Emergency phone number 911 / 112

Other

Web site: www.elgawelding.com

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Description The form of this product does not contribute to a hazard classification of the product.

2.2 Label elements



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The product do not require labeling

2.3 Other hazards

This product contains Nickel as classified as sensitizing and Limited evidence of a carcinogenic effect. The form of this product does not contribute to a hazard classification of the product.

When the product is used in the welding process the most important hazards are:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical name	CAS No. EC No. REACH No.	Concentration	Classification	H-phrase
Chromium	7440-47-3 231-157-5 01-2119485652-31-XXXX	<30%	-	-
manganese	7439-96-5 231-105-1 01-2119449803-34-XXXX	<20%	-	-
Nickel	7440-02-0 231-111-4 01-2119438727-29-XXXX	<20%	Skin Sens. 1, STOT RE 1	H317, H351, H372
Molybdenum	7439-98-7 231-107-2 01-2119472304-43-XXXX	<10%	-	-

Substance additional information

For the full text of the H phrases mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures



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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

Burns should be treated by doctor.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Burns from radiation, see doctor.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation

Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons.

4.3 Indication of any immediate medical attention and special treatment needed

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 Special hazards arising from the substance or mixture

Not applicable

5.3 Advice for firefighters

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. . Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. . Skin contact should be avoided to prevent possible allergic reactions. .

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and material for containment and cleaning up

Not applicable

6.4 Reference to other sections



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Personal protection see section 8 and for disposal see section 13. Environmental precautions, Paragraph 12. See also section 7 Precautions for safe handling.

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 protective clothing and eye protection appropriate to arc welding. Remove all flammable materials and liquids before welding.

General hygiene

Wash hands before breaks and immediately after handling the product.

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 or beside walls. Store away from chemical substances like acids which could cause chemical reactions.

7.3 Specific end use(s)

welding process

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

National occupational exposure limits

<i>Ingredient</i>	<i>CAS no.</i>	<i>EC No.</i>	<i>Exposure limit mg/m3-ppm</i>		<i>Short-term exposure limit mg/m3-ppm</i>		<i>Remark</i>	<i>Source</i>	<i>Year</i>
Chromium	7440-47-3	231-157-5	0,5	-	-	-	-	EH40/2005 Work place exposure limits	-

8.2 Exposure controls

Technical precaution measures

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. .

Eye / face protection

Wear eye protection appropriate for welding.



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Safety gloves

Skin contact should be avoided to prevent possible allergic reactions. . Wear protective gloves.

Other skin protection

Wear body protection which help to prevent injury from radiation, sparks and electric shock.

Respiratory protection

Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance, colour

grey

Appearance, physical state

Not applicable

Auto-ignition temperature

Not applicable

Autoinflammability

not auto-flammable

Decomposition temperature

Not applicable

Evaporation rate

Not applicable

Explosive properties

Not explosive

Flammability (solid, gas)

Not applicable

Flash point

Not applicable

Form

Electrode

Initial boiling point and boiling range

Not applicable

Melting point / freezing point

Not applicable

Odour

odourless

Odour treshold

Not applicable

Oxidising properties

Not applicable

Partition coefficient: n-octanol / water

Not applicable

pH value

Not applicable

Relative density

Not applicable

Solubility

Not applicable

Solubility in water

insoluble



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Upper / lower flammability or explosive limits	Not applicable
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Vapour density	Not applicable
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Vapour pressure	Not applicable
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Viscosity	Not applicable
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9.2 Other information

Not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Exothermic reaction with strong acids.

10.2 Chemical stability

Stable at normal conditions

10.3 Possibility of hazardous reactions

Reaction with: acids, alkalis and oxidizing agents.

10.4 Conditions to avoid

None under normal conditions.

10.5 Incompatible materials

Avoid contact with: acids, alkalis and oxidizing agents.

10.6 Hazardous decomposition products

Welding fumes and gases. Additional fume may arise from coatings and contaminants on the base material.

Fume analysis: wt %

Fe 4-6

Mn 3-5

Ni 0,2-0,6

Cr 4-6

Cu <0,1

Pb <0,1

F 0-10

Cr is partly present as Cr(VI).

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



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SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Conditions to avoid: none in the form supplied.

When welding , fumes and gases generated can be dangerous to health.

Acute toxicity	Excessive exposures may affect human health, as follows: Aspiration may cause pulmonary oedema and pneumonitis. Short-term overexposure can cause dizziness, nausea and irritation of the nose, throat or eyes.
Irritation	Not applicable
Corrosive effects	Not applicable
Sensitisation	May cause sensitization by skin contact. Nickel is the most common of all causes of allergic contact dermatitis.
Mutagenicity	Not applicable
Carcinogenicity	Certain chromium and nickel compounds, like Cr(VI) are suspected of being cancercausing agents. Welding fumes are possibly carcinogenic to humans.
Repeated dose toxicity	Not applicable
Reproductive toxicity	Not applicable
LD50 Oral	Manganese: 9000 mg/kg (rat) Nickel: >5000 mg/kg (rat) Chromium: 19,8 mg/kg (rat)

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

The welding process can effect the enviroment if fume is released directly into the atmosphere. Residues from welding consumables could degrade and accumulate into soils and ground water.

Acute fish toxicity	LC50 Fish 96h: Manganese: 2,91 mg/l Molybdenum: 2600 mg/l Nickel: >100 mg/l Brachydanio rerio (zebra fish) Chromium: 3,4 mg/l Onchorhynchus mykiss (Rainbow trout)
Acute algae toxicity	IC50 Algae 72h: Manganese: 0,55 mg/l Nickel: 0,18 mg/l Selenastrum capricornutum (green algae) Chromium: 0,001 mg/l



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Acute crustacean toxicity

EC50 Daphnia 48h:
Manganese: 5,2 mg/l
Nickel: >100 mg/l Daphnia magna (Water flea)
Chromium: 0,02 mg/l Daphnia pulex (Water flea)

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):

Manganese: 59052

Nickel: 16

Chromium: 200

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

Not applicable

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal considerations

Dispose of any product, residue or packing material according to national and local regulations.
Spent fume extraction filters shall be disposed of as dangerous waste.

Other

Waste code (EWC)

12 01 13 - welding waste

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)



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Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

The product does not need to be labelled in accordance with EC directives or respective national laws.

National regulations

EH40/2005 Workplace exposure limits
Waste Ordinance (2011:927)
Local laws and regulations should be carefully observed.

15.2 Chemical safety assessment

Not applicable

SECTION 16. OTHER INFORMATION

Changes to previous revision

Changes are made in the following sections: 3, 15, 16.

References to key literature and data sources

Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council.
EH40/2005 Workplace exposure limits.
Waste Ordinance (2011:927).
www.prevent.se
C&L Inventory database
Annex VI CLP Regulation (EC) 1272/2008

Phrase meaning

Skin Sens. 1 - Skin sensitisation, hazard category 1
STOT RE 1 - Specific Target Organ Toxicity — Repeated exposure, hazard category 1
H317 - May cause an allergic skin reaction.
H351 - Suspected of causing cancer.
H372 - Causes damage to organs through prolonged or repeated exposure cause the hazard>.



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Other

Manufacturer's notes

Read this Safety Data Sheet carefully and become aware of hazards implied and the Safety information.