



SAFETY DATA SHEET

Elgacore DWA 55L

Version number: 1

Issued: 2013-04-19

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

1.1 Product identifier

Trade name Elgacore DWA 55L

Article-no 9561 - XXXX

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

Article type FCAW Un- and Low-alloyed 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

Email sds@elga.se

1.4 Emergency telephone number

Available outside office hours Yes

Emergency phone number 999

Other

Additional product information Web site: www.elgawelding.com

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

Not applicable

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.



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Arc rays can injure eyes and burn skin.
Electric shock: can kill. Avoid touching live electrical parts.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical name	CAS No. EC No. REACH No.	Concentration	Classification	R-phrase H-phrase
Titanium dioxide	13463-67-7 236-675-5 01-2119489379-17-XXXX	<50%	- -	- -
Manganese	7439-96-5 231-105-1 01-2119449803-34-XXXX	<25%	- -	- -
Nickel	7440-02-0 231-111-4 01-2119438727-29-XXXX	<15%	Canc2, T Skin Sens. 1, STOT RE 1	R40, R43, R48/23 H317, H351, H372
Kieselgur	61790-53-2 612-383-7 -	<10%	- -	- -
Silicon	7440-21-3 231-130-8 01-2119480401-47-XXXX	<10%	- -	R10 H224
Aluminium oxide	1344-28-1 215-691-6 01-2119529248-35-XXXX	<5%	- -	- H335

Substance additional information

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

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.
Ingestion	When symptoms persist or in all cases of doubt seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed



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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

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

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

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

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



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

7.3 Specific end use(s)

welding process

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

National occupational exposure limits	Ingredient	CAS no.	EC No.	Exposure limit mg/m3-ppm	Short-term exposure limit mg/m3-ppm	Remark	Source	Year
	Titanium dioxide	13463-67-7	236-675-5	10	-	- Total inhale	EH40/2005 Workplace exposure limits	-
	Titanium dioxide	13463-67-7	236-675-5	4	-	- respirable	EH40/2005 Workplace exposure limits	-
	Diatomaceous earth, natural	61790-53-2	612-383-7	1,2	-	- respirable dust	EH40/2005 Workplace exposure limits	-
	Aluminium oxides	1344-28-1	215-691-6	10	-	- inhalable dust	EH40/2005 Workplace exposure limits	-
	Aluminium oxides	1344-28-1	215-691-6	4	-	- respirable dust	EH40/2005 Workplace 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.
Safety gloves	Skin contact should be avoided to prevent possible allergic reactions. . Wear suitable protective gloves where there is a risk of skin contact.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance, colour silver

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Appearance, physical state	Metal strip containing flux.
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	Fast
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
Upper / lower flammability or explosive limits	Not applicable
Vapour density	Not applicable
Vapour pressure	Not applicable
Viscosity	Not applicable

9.2 Other information

Not applicable

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



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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 30-40

Mn 10-15

Ni 0,05-0,1

Cr 0,01-0,03

0,01-0,03

F 0,5-3,0

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

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	Nickel: >5000 mg/kg (rat) Maganese: 9000 mg/kg (rat) titanium dioxide: >100000 mg/kg (rat) Aluminiumoxide: >5000 mg/kg (rat) Zirconiumoxide: >8800 mg/kg (mouse) Silicon: 3160 mg/kg (rat) iron: 30000 mg/kg (rat)
LD50 Dermal	titanium dioxide: >10000 mg/kg (rabbit)
LC50 Inhalation	titanium dioxide: >4,68 mg/l 4h (rat)



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Toxicity in case of skin contact

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:
Maganese: 2,91 mg/l
titanium dioxide: >1000 mg/l *Fundulus heteroclitus*
Aluminiumoxide: >100 mg/l *Salmo trutta*
Nickel: >100 mg/l *Brachydanio rerio* (zebra fish)

Acute algae toxicity

IC50 Algae 72h:
Maganese: 0,55 mg/l
Aluminiumoxide: >100 mg/l *Selenastrum capricornutum* (green algae)
Nickel: 0,18 mg/l *Selenastrum capricornutum* (green algae)
titanium dioxide: >1000 mg/l *Fundulus heteroclitus*
iron: 5,2 mg/l

Acute crustacean toxicity

EC50 Daphnia 48h:
Maganese: 5,2 mg/l
titanium dioxide: >1000 mg/l *Daphnia magna* (Water flea)
Aluminiumoxide: >100 mg/l *Daphnia magna* (Water flea)
Nickel: >100 mg/l *Daphnia magna* (Water flea)
iron:0,1 mg/l

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):

Maganese: 59052

Nickel: 16

iron: 140000

12.4 Mobility in soil

Mobility

Mobility in soil: immobile

12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Not applicable

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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. Do not dispose together with domestic waste. Do not empty into drains.

Other

Waste code (EWC) 12 01 13 - welding waste

14. TRANSPORT INFORMATION

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

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

Other

Dangerous goods No

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
The Waste Regulations 2011 No. 988
Local laws and regulations should be carefully observed.

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15.2 Chemical safety assessment

Not applicable

16. OTHER INFORMATION

Changes to previous revision

Changes are made in the following sections: 1, 4, 5, 6, 7, 8, 11, 12 13, 15 and 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
The Waste Regulations 2011 No. 988
KIFS 2005:7
www.prevent.se
C&L Inventory database
Annex VI CLP Regulation (EC) 1272/2008

Phrase meaning

Canc2 - Cancer, Category 2
T - Toxic
Skin Sens. 1 - Skin sensitisation, hazard category 1
STOT RE 1 - Specific Target Organ Toxicity — Repeated exposure, hazard category 1
R10 - Flammable.
R40 - Limited evidence of a carcinogenic effect.
R43 - May cause sensitization by skin contact.
R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation.
H224 - Extremely flammable liquid and vapour.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer .
H372 - Causes damage to organs through prolonged or repeated exposure .

Other

Manufacturer's notes

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