Safety Data Sheet

according to Regulation (EC) No 1907/2006

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Stellite 12 Rod/Wire/Electrode/Part

Further trade names

KSYC1003-1

UFI: 99SV-R03K-2003-VGKG

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

Use of the substance/mixture

Welding rods, Coated rod (electrode), Welding wire. For industrial purposes only.

Uses advised against

The product is only to be used for the intended application.

1.3. Details of the supplier of the safety data sheet

Company name:	Deloro Wear Solutions GmbH
Street:	Zur Bergpflege 51 - 53
Place:	D-56070 Koblenz
Telephone:	+49 (261) 80880
E-mail:	wearsolutions@deloro.com
Contact person:	Frau Melanie Arens
E-mail:	wearsolutions@deloro.com
Internet:	http://www.deloro.com

1.4. Emergency telephone number:

Poison Control Center (Mayence, GER): +49 (0)6131 - 19240 (24h) This safety data sheet is an English translation of the EU safety data sheet and is not suitable for the distribution in a specific country.

Further Information

according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute Tox. 4; H302
Eye Irrit. 2; H319
Resp. Sens. 1; H334
Skin Sens. 1; H317
Muta. 2; H341
Carc. 1B; H350
Repr. 1B; H360F
STOT RE 2; H373
Aquatic Chronic 4; H413

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Additional advice on labelling

For this product, a hazard label is not required according to section 1.3.4 of Annex I of the CLP regulation.

2.3. Other hazards

Metal in compact form is not hazardous to humans or the environment. However, dust generated by mechanical processing (sanding, sawing, etc.) can be hazardous to people and the environment.
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7440-48-4	cobalt			> 50 %
	231-158-0	027-001-00-9		
	Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, Aquatic Chronic 4; H350 H341 H360F H302 H319 H334 H317 H413			
7440-47-3	Chromium			25 - 50 %
	231-157-5			
7440-02-0	nickel powder			1 - 2,5 %
	231-111-4	028-002-01-4		
	Carc. 2, Skin Sens. 1, STOT RE 1, Aquatic Chronic 3; H351 H317 H372 H412			
7439-96-5	manganese			0,1 - 1 %
	231-105-1			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7440-48-4	231-158-0	cobalt	> 50 %
	oral: LD50 = 550 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of persistent symtoms, consult a doctor/physician. Do not breathe dust. Do not inhale vapours generated during processing. Do not get in eyes, on skin, or on clothing. Avoid dust generation. First aider: Pay attention to self-protection!

After inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Where appropriate artificial ventilation. Seek medical help.

After contact with skin

Rinse skin with water. Change contaminated clothing. Consult a doctor if symptoms persist.
The melted product can cause severe burns. After skin contact with melted product: 1. quickly cool with water (not ice), 2. do not pull off melted product from skin, 3. burns caused by the melted product must be treated medically.

After contact with eyes

In case of contact with eyes, rinse immediately (and under protection of the uninjured eye) with plenty of flowing water for 10 minutes, holding eyelids wide apart. Remove contact lenses. Consult an ophthalmologist. The melted product can cause severe burns. Rinse immediately carefully and thoroughly with eye-bath or water. Call a physician immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. Seek medical advise. Do NOT induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer. May damage fertility. May cause damage to organs through prolonged or repeated exposure if inhaled.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Respiratory or skin sensitisation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Chromium: Carbon dioxide (CO_2).

5.2. Special hazards arising from the substance or mixture

The product is non-flammable. Thermal decomposition can lead to the escape of irritating gases and vapours.
In case of fire may be liberated: Carbon oxides

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Wear personal protection equipment. Do not inhale explosion and combustion gases.

Additional information

Contaminated fire-fighting water must be collected separately. Dispose of waste according to applicable legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid dust generation. Provide adequate ventilation. Avoid contact with skin and eyes. Wear personal protection equipment. Use appropriate respiratory protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

For containment

Avoid generation of dust.

For cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Personal protection equipment: see section 8
Handling and storage: see section 7
For waste disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

When using do not eat, drink or smoke. Use personal protection equipment. Avoid contact with eyes and skin. Take off contaminated clothing and wash it before reuse. Do not breathe dust.

Advice on protection against fire and explosion

Contaminated fire-fighting water must be collected separately.

Advice on general occupational hygiene

Wash hands before breaks and after work. Do not eat, drink, smoke or sneeze at the workplace. Keep away from food, drink and animal feedingstuffs.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place.

Hints on joint storage

Store seperately from foodstuff.

7.3. Specific end use(s)

Welding rods, Coated rod (electrode), Welding wire. For industrial purposes only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
7440-47-3	Chromium metal	-	2		TWA (8 h)	
7440-48-4	Cobalt	-	0.02		TWA (8 h)	
7439-96-5	Manganese (Respirable Fraction)	-	0.05		TWA (8 h)	
7440-02-0	Nickel	-	0.5		TWA (8 h)	
7440-21-3	Silicon Si, total inhalable dust	-	10		TWA (8 h)	
7440-33-7	Tungsten metal	-	5		TWA (8 h)	
		-	10		STEL (15 min)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
7440-48-4	Cobalt	Cobalt	1 µg/L	Blood	End of shift at end of workweek
7440-47-3	Chromium	Total chromium	25 µg/L	Urine	End of shift at end of workweek
7440-02-0	Nickel	Ni	3 µg/L	Urine	After several consecutive working shifts

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation. In case of application in interior spaces proper ventilation/exhaustion must be

provided.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tighty fitting safety glasses with side shields.

Hand protection

Tested protective gloves are to be worn: For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The glove material has to be impermeable and resistant to the product / the substance / the mixture. When selecting the glove material, observe breakthrough times, permeation rates and degradation.
Suitable material: NBR (Nitrile rubber).
Coating thickness: 0,11 mm
penetration time (maximum wearing period): 480 min

Skin protection

Full cover clothing covering arms and legs.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Use suitable breathing apparatus.
Full-/half-/quarter-face masks (EN 136/140), P2, P3, FFP2, FFP3

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	metallic	
Odour:	odourless	
Melting point/freezing point:		1285-1395 °C
Boiling point or initial boiling point and boiling range:		no data available
Flammability:		no data available
Lower explosion limits:		no data available
Upper explosion limits:		no data available
Flash point:		no data available
Auto-ignition temperature:		no data available
Decomposition temperature:		no data available
pH-Value:		no data available
Viscosity / kinematic:		no data available
Water solubility:		insoluble
Dissolution rate:		no data available
Partition coefficient n-octanol/water:		no data available
Dispersion stability:		no data available
Vapour pressure:		no data available
Density:		8,44 g/cm³
Relative density:		no data available
Bulk density:		no data available
Relative vapour density:		no data available
Particle characteristics:		no data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

not explosive.

Self-ignition temperature

Solid:	no data available

Gas: no data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Sublimation point: no data available
Softening point: no data available
Pour point: no data available
Viscosity / dynamic: no data available

Further Information

no data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactivity under regular conditions.

10.2. Chemical stability

The product is stable when stored and handled appropriately.

10.3. Possibility of hazardous reactions

No dangerous reactions to be expected if used properly.

10.4. Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5. Incompatible materials

Oxidizing agents, strong. Acids.

10.6. Hazardous decomposition products

When used properly no hazardous products of decomposition are expected. Thermal decomposition can lead to the escape of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 550,0 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7440-48-4	cobalt				
	oral	LD50 550 mg/kg		supplier statement	

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (cobalt)
May cause an allergic skin reaction. (cobalt; nickel powder)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing genetic defects. (cobalt)
May cause cancer. (cobalt)
May damage fertility. (cobalt)

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (nickel powder)

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1. Toxicity

May cause long lasting harmful effects to aquatic life.

12.2. Persistence and degradability

No further data available.

12.3. Bioaccumulative potential

No further data available.

12.4. Mobility in soil

No further data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process. Dispose of waste according to applicable legislation.

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No special precautions known.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 65, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not applicable
Regulation (EC) No. 648/2004 [Detergents regulation]: not applicable
Regulation (EC) No 2019/1021 on persistent organic pollutants: not applicable
Regulation (EC) No 649/2012 of the European Parliament and of the Council concerning the export and import of dangerous chemicals: This mix contains no chemicals that are subject to the export notification procedures (annex 1).
This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none
This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,16.

Version 1,00 - 07.03.2024 - first creation
Version 1,01 - 26.03.2024 - Adjustments in sections 1

Abbreviations and acronyms

Acute Tox: Acute toxicity
Eye Irrit: Eye irritation
Resp. Sens: Respiratory sensitisation
Skin Sens: Skin sensitisation
Muta: Germ cell mutagenicity
Carc: Carcinogenicity
Repr: Reproductive toxicity
STOT RE: Specific target organ toxicity - repeated exposure
Aquatic Chronic: Chronic aquatic hazard
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
BImSchV (Fed.Imm.Prot.Act): Directive on the Implementation of the Federal Immission Protection Act
CAS: Chemical Abstracts Service
DIN: Norm of the Deutsche Institut für Normung (German Institute for Standardization)
EC: Effective Concentration
EG: European Community (Europäische Gemeinschaft)
EN: European Norm
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
ISO: Norm of the International Standards Organization
CLP: Classification, Labeling, Packaging
IUCLID: International Uniform ChemicaL Information Database
LC: Lethal concentration
LD: Lethal dose
log Kow: Octanol/water partition coefficient
MARPOL: Maritime Pollution Convention = Convention for the Prevention of Maritime Pollution from Ships
OECD: Organisation for Economic Co-operation and Development
PBT: Persistent, bio-cumulative, toxic
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail
TRGS: Technische Regeln für Gefahrstoffe
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent and very bio-cumulative
VwVwS: Administrative Regulation for Water Pollutants
WGK: German Water Hazard Class
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
TLV: Threshold Limiting Value
STOT: Specific Target Organ Toxicity
AwSV: Ordinance on Installations for Handling Substances Hazardous to Water

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Eye Irrit. 2; H319	Calculation method
Resp. Sens. 1; H334	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Carc. 1B; H350	Calculation method
Repr. 1B; H360F	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 4; H413	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360F	May damage fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Further Information

The information given in this safety data sheet is to describe the product's safety regulations. It is not for guaranteeing certain characteristics and is based on today's knowledge. The safety data sheet was generated upon information of pre-suppliers by:

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(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)