

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 1 of 8

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

1.1. Product identifier

flux cored wire, containing nickel, chromium and boron

Further trade names

DURMAT NICRW, DURMAT NIFD, DURMAT NIFD-Plus, DURMAT NI 40, DURMAT AS-761, DURMAT FD 767, DURMAT FD 768, DURMAT FD 771, DURMAT FD 7760

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

Use of the substance/mixture

Cored wire: Welding and soldering products
Reserved for industrial and professional use.

Uses advised against

The uses are provided in Section 1.2. Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

1.3. Details of the supplier of the safety data sheet

Company name:	DURUM Verschleiss-Schutz GmbH	
Street:	Carl-Friedrich-Benz-Strasse 7	
Place:	D-47877 Willich, Germany	
Telephone:	+49 (0) 21 54/48 37-0	Telefax: +49 (0) 21 54/48 37-78
e-mail:	info@durum.com	
Internet:	www.durmat.com	

1.4. Emergency telephone number:

+1-800-424-9300 (Chemtrec Emergency)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Respiratory or skin sensitisation: Skin Sens. 1
Carcinogenicity: Carc. 2
Specific target organ toxicity - repeated exposure: STOT RE 1
Hazard Statements:
May cause an allergic skin reaction.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.

2.2. Label elements

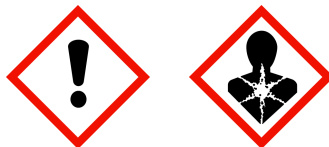
Regulation (EC) No. 1272/2008

Hazard components for labelling

nickel

Signal word: Danger

Pictograms:



Hazard statements

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 2 of 8

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P362+P364	Take off contaminated clothing and wash it before reuse.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:



Hazard statements

H317-H351-H372

Precautionary statements

P201-P202-P260-P264-P270-P272-P280-P302+P352-P321-P362+P364-P308+P313-P405-P501

2.3. Other hazards

May be harmful with intended application by arising ozone and nitrogen oxides.

Cancer-causing chromium(VI)-compounds could be generated by welding chromium containing materials.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
12070-12-1	tungsten carbide			< 60 %
	235-123-0		01-2119486687-17	
7440-47-3	chromium			< 30 %
	231-157-5		01-2119485652-31	
7440-02-0	nickel			30 - 50 %
	231-111-4	028-002-00-7	01-2119438727-29	
	Carc. 2, Skin Sens. 1, STOT RE 1; H351 H317 H372			
7440-42-8	boron			< 5 %
	231-151-2			

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

SECTION 4: First aid measures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 3 of 8

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Wash out mouth with water. Make affected person vomit if conscious when large quantities swallowed.

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

No information available.

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

Treat symptomatically. No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

metal-fire-drencher, dry sand

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: metallic oxides containing heavy metals.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 4 of 8

Prevent formation of clouds of dust. Wear suitable protective clothing and gloves.

Advice on protection against fire and explosion

Conditions to avoid: Heat, Oxidising substances

Further information on handling

Advices on general occupational hygiene: When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

Hints on joint storage

Do not store together with: Oxidising substances, Acids

Further information on storage conditions

Advices on general occupational hygiene: When using do not eat, drink, smoke, sniff.

7.3. Specific end use(s)

Welding and soldering products
Reserved for industrial and professional use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7440-47-3	Chromium	-	0.5		TWA (8 h)	WEL

Additional advice on limit values

Components with workplace or biological limit values to be monitored: E: inhalable fraction, A: respirable fraction May be harmful with intended application by arising ozone and nitrogen oxides. Cancer-causing chromium(VI)-compounds could be generated by welding chromium containing materials.

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

Protective and hygiene measures

When using do not eat, drink, smoke, sniff.

Eye/face protection

Safety goggles and dark lenses as appropriate to the thermal spray process.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Skin protection

Wear suitable protective clothing.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 5 of 8

Respiratory protection

Respiratory protection necessary at: insufficient ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: solid
Colour: light grey - dark grey
Odour: odourless

Test method

pH-Value: not applicable

Changes in the physical state

Melting point: approx. 1010 bis 1025 °C
Initial boiling point and boiling range: > 2900 °C
Flash point: not applicable

Flammability

according 92/69 EWG, A10:
not applicable

Lower explosion limits:

not identified

Upper explosion limits:

not identified

Auto-ignition temperature

according 92/69 EWG, A16:
not applicable

Oxidizing properties

according 92/69 EWG, A17: not applicable

Vapour pressure:

negligible

Density:

2 - 6 g/cm³

Water solubility:

not soluble

Solubility in other solvents

not identified

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

The product is stable under storage at normal ambient temperatures.

10.5. Incompatible materials

Do not store together with: Oxidising substances, Acids

10.6. Hazardous decomposition products

Formation of ozone and nitrogen oxides on regular use by plasma flame. This reaction is independent to material used.

Cancer-causing chromium(VI)-compounds could be generated by welding chromium containing materials.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 6 of 8

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

No toxicological information is available on the product but on the ingredients named in section 3.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7440-02-0	nickel				
	oral	LD50 > 9000 mg/kg	Rat		

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (nickel)

Exposure to high concentrations may lead to sensitizing action to the skin and airways. May lead to allergic or irritative reactions on very sensitive persons.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (nickel)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

STOT-single exposure

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

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (nickel)

Aspiration hazard

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

Further information

May be harmful through products of decomposition on regular use (see section 10)

SECTION 12: Ecological information

12.1. Toxicity

No ecological information is available on the product but on the ingredients named in section 3.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7440-47-3	chromium					
	Acute fish toxicity	LC50 40,5 mg/l	96 h		Gestis	
	Acute algae toxicity	ErC50 8,75 mg/l	72 h		Gestis	
7440-02-0	nickel					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio		
	Acute algae toxicity	ErC50 100 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna		

12.2. Persistence and degradability

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 7 of 8

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. List of proposed waste codes/waste designations in accordance with EWC

Waste disposal number of waste from residues/unused products

120114 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; machining sludges containing hazardous substances; hazardous waste

Waste disposal number of used product

120114 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; machining sludges containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

120114 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; machining sludges containing hazardous substances; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

- | | |
|---|--|
| <u>14.1. UN number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Inland waterways transport (ADN)

- | | |
|---|--|
| <u>14.1. UN number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Marine transport (IMDG)

- | | |
|---|--|
| <u>14.1. UN number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |

Safety Data Sheet

according to Regulation (EC) No 1907/2006

flux cored wire, containing nickel, chromium and boron

Revision date: 10.10.2019

Product code: 7332DU

Page 8 of 8

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

Air transport (ICAO-TI/IATA-DGR)

14.1. UN 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 information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

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 27: nickel

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils 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.

Water contaminating class (D):

1 - slightly water contaminating

Skin resorption/Sensitization:

Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

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

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Carc. 2; H351	Calculation method
STOT RE 1; H372	Calculation method

Relevant H and EUH statements (number and full text)

H317 May cause an allergic skin reaction.
 H351 Suspected of causing cancer.
 H372 Causes damage to organs through prolonged or repeated exposure.

Further Information

The information enclosed this safety data sheet are correct according to our knowledge. They should detail the needs of safety for our products, but demonstrate no guarantee for product attributes and justify no legal relationship. Our departments will provide assistance with any special question regarding the conventional use of our product.

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