

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

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

#### 1.1. Product identifier

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

Article code: 982170447000, 982170447000X

1.2. Relevant identified uses of the substance or mixture and uses advised against  
No further relevant information available.

Application of the substance / the mixture: Flexible cord for thermal spray application.

Uses advised against: Other uses than the identified uses indicated above.

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:  
Saint-Gobain Coating Solutions  
50, rue du Mourelet, Z.I. Courtine Mourre Frais, B.P. 90966  
84093 Avignon Cedex 9, France  
Telephone: +33 (0) 4 90 85 85 00 (8:00-17:00)  
Fax: +33 (0) 4 90 82 94 52

Further information obtainable from: [qehs.coating-solutions@saint-gobain.com](mailto:qehs.coating-solutions@saint-gobain.com)

#### 1.4. Emergency telephone number

London, Medical toxicology information service (NHS)  
Tel (24 hour): 020 7188 0300

### \* SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS08 health hazard

Carc. 2                    H351 Suspected of causing cancer.

STOT RE 1                H372 Causes damage to organs through prolonged or repeated exposure.

(Contd. on page 2)

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Revision: 10.08.2018

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**FLEXICORD ROC DUR 6750 PA D4,75**



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

## 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:



GHS07 GHS08

Signal word: Danger

Hazard-determining components of labelling:

nickel

Hazard statements:

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## 2.3. Other hazards

Under its present form the product is inert.

During thermal spraying application, the organic components of the products are destroyed.

(Contd. on page 3)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

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Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

The inorganic part is fused and sprayed on the substrate and will consist in a functional coating.  
 The thermal spraying operation must be controlled.  
 Results of PBT and vPvB assessment:  
 The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### \* SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

| Dangerous components:   |                    |   |            |
|---|--------------------|---|------------|
| CAS: 12070-12-1<br>EINECS: 235-123-0<br>Reg.no.: 01-2119486687-17 | tungsten carbide   | substance with a community workplace exposure limit                             | 25-50%     |
| CAS: 7440-02-0<br>EINECS: 231-111-4<br>Reg.no.: 01-2119438727-29  | nickel             | Carc. 2, H351; STOT RE 1, H372<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 | 25-50%     |
| CAS: 12070-13-2<br>EINECS: 235-124-6<br>Reg.no.: 01-2119884709-17 | ditungsten carbide | substance with a community workplace exposure limit                             | ≥5-≤15%    |
| CAS: 7440-47-3<br>EINECS: 231-157-5<br>Reg.no.: 01-2119485652-31  | chromium           | substance with a community workplace exposure limit                             | ≥2.5-<10%  |
| CAS: 7440-21-3<br>EINECS: 231-130-8<br>Reg.no.: 01-2119480401-47  | silicon            | substance with a community workplace exposure limit                             | ≥0.1-≤2.5% |
| CAS: 7440-44-0<br>EINECS: 231-153-3                               | carbon             | substance with a community workplace exposure limit                             | ≥0.1-≤2.5% |

Additional information: For the wording of the listed hazard phrases refer to section 16.

### \* SECTION 4: First aid measures

#### 4.1. Description of first aid measures

General information:

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

(Contd. on page 4)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

After skin contact:

Immediately wash with water and soap and rinse thoroughly.  
Seek medical attention in case of problems or if problems persist.

After eye contact:

Rinse opened eye for several minutes under running water.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Seek medical attention in case of problems or if problems persist.

After swallowing:

Rinse mouth.  
Seek immediate medical advice.

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

Allergic reactions

Prolonged or repetitive skin contact may cause skin defatting or dermatitis.

Coughing

Breathing difficulty

Rhinitis

Sinusitis

Asthma

Loss of weight

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

First Aid, decontamination, treatment of symptoms.

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\* **SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing agents:

Special powder for metal fires. Do not use water.

Sand or earth may be used for small fires only.

Fire-extinguishing powder

Carbon dioxide (CO<sub>2</sub>)

For safety reasons unsuitable extinguishing agents: Water

5.2. Special hazards arising from the substance or mixture

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Carbon monoxide (CO)

Carbon dioxide (CO<sub>2</sub>)

(Contd. on page 5)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

---

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

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Metal oxide fume

### 5.3. Advice for firefighters

Protective equipment:

Do not inhale explosion gases or combustion gases.

Wear a self-contained breathing apparatus and chemical resistant suit.

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

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## \* SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

Avoid any contact with eyes or skin.

Do not breathe dust/fume/gas/mist/vapours/spray.

Avoid formation of dust.

### 6.2. Environmental precautions Dumping into the environment must be prevented.

### 6.3. Methods and material for containment and cleaning up

Cleaning up only by authorised personal.

Use approved industrial vacuum cleaner for removal.

Remove mechanically, placing in appropriate containers for disposal.

### 6.4. Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## \* SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid contact with eyes or skin. Wear personal protective equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

Information about fire - and explosion protection: No special measures required.

(Contd. on page 6)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

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**FLEXICORD ROC DUR 6750 PA D4,75**

7.2. Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store only in the original container.

Storage temperature: 10-32°C

Humidity: 35-55%%

Information about storage in one common storage facility:

Keep away from food, drink and animal feeding stuffs.

See section 10.5.

Further information about storage conditions:

Protect from humidity and water.

Protect from heat and direct sunlight.

Store in cool, dry conditions in well sealed containers.

Store under lock and key and with access restricted to technical experts or their assistants only.

Storage class: 6.1D Incombustible toxic or chronic active substances (TRGS 510 DE)

7.3. Specific end use(s) See section 1.

\* **SECTION 8: Exposure controls/personal protection**

Additional information about design of technical facilities: No further data; see item 7.

8.1. Control parameters

|   |  |
|---|--|
| Ingredients with limit values that require monitoring at the workplace: |  |
| <b>CAS: 12070-12-1 tungsten carbide</b>                                 |  |
| WEL (Great Britain)   | Short-term value: 10 mg/m <sup>3</sup><br>Long-term value: 5 mg/m <sup>3</sup><br>as W |
| <b>CAS: 7440-02-0 nickel</b>  |  |
| WEL (Great Britain)   | Long-term value: 0.5 mg/m <sup>3</sup><br>as Ni; Sk; Carc                              |
| <b>CAS: 12070-13-2 ditungsten carbide</b>                               |  |
| WEL (Great Britain)   | Short-term value: 10 mg/m <sup>3</sup><br>Long-term value: 5 mg/m <sup>3</sup><br>as W |

(Contd. on page 7)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

|                                |   |
|--------------------------------|---|
| <b>CAS: 7440-47-3 chromium</b> |   |
| WEL (Great Britain)            | Long-term value: 0.5 mg/m <sup>3</sup>  |
| IOELV (EU)                     | Long-term value: 2 mg/m <sup>3</sup><br>as Cr                                   |
| <b>CAS: 7440-21-3 silicon</b>  |   |
| WEL (Great Britain)            | Long-term value: 10* 4** mg/m <sup>3</sup><br>*inhalable dust **respirable dust |
| <b>CAS: 7440-44-0 carbon</b>   |   |
| WEL (Great Britain)            | Long-term value: 10* 4** mg/m <sup>3</sup><br>*inhalable dust **respirable      |

Regulatory information:

WEL (Great Britain): EH40/2011

IOELV (EU): (EU) 2017/164

|                              |                                     |                                   |
|------------------------------|-------------------------------------|-----------------------------------|
| DNELs                        |                                     |                                   |
| <b>CAS: 7440-02-0 nickel</b> |                                     |                                   |
| Dermal                       | DNEL - long term - local            | 0.035 mg/cm <sup>2</sup> (worker) |
| Inhalative                   | DNEL - long term - local            | 0.05 mg/m <sup>3</sup> (worker)   |
|                              | DNEL - long term - systemic         | 0.05 mg/m <sup>3</sup> (worker)   |
|                              | DNEL - short term - local           | 11.9 mg/m <sup>3</sup> (worker)   |
| PNECs                        |                                     |                                   |
| <b>CAS: 7440-02-0 nickel</b> |                                     |                                   |
| PNEC                         | 3.55 µg/l (fresh water)             |                                   |
|                              | 8.6 µg/l (marine water)             |                                   |
| PNEC                         | 29.9 mg/kg (soil)                   |                                   |
|                              | 0.33 mg/kg (sewage treatment plant) |                                   |

Additional information: The lists valid during the making were used as basis.

## 8.2. Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.

Ensure that washing facilities are available at the work place.

Wash hands before breaks and at the end of work.

(Contd. on page 8)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

Immediately remove all soiled and contaminated clothing.  
Wear personal protection equipment.  
Avoid generation of dust.

Respiratory protection:

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, a self-contained breathing apparatus must be used!

Suitable respiratory protective equipment:

FFP3

Protection of hands:

Tested protective gloves are to be worn. When handling chemical substances, chemical protective gloves must be worn with CE label including a four digit code. Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves:

Nitrile rubber, NBR

During thermal spraying operation:

Leather gloves

Gloves resistant to heat

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses

During thermal spraying operation:

UV-protection glasses

Face shield

Body protection:

Protective work clothing

During thermal spraying operation:

Flame-retardant clothing

Safety shoes

Ear protection helmet

(Contd. on page 9)



## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

Limitation and supervision of exposure into the environment: Dumping into the environment must be prevented.

### \* SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

##### General Information

##### Appearance:

Form: Solid  
Colour: Interior: dark grey  
Exterior: dark red

Odour: Odourless

Odour threshold: Not determined.

pH-value: Not applicable.

##### Change in condition

Melting point/freezing point: 1050 °C (inorganic)

Initial boiling point and boiling range: Undetermined.

Flash point: No data available.

Flammability (solid, gas): No data available.

Ignition temperature:  $\geq 360$  °C (organic)

Decomposition temperature: No data available.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.

Vapour pressure: Not applicable.

Density: 5.8 g/cm<sup>3</sup>

Vapour density: Not applicable.

Evaporation rate: Not applicable.

(Contd. on page 10)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

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Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

Solubility in / Miscibility with  
water:

Partly soluble.  
(organic components)

Partition coefficient: n-octanol/water: Not determined.

Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

Solvent content:

Organic solvents: ca. 10 %

VOC (EC) 0.00 %

9.2. Other information

No further relevant information available.

\* **SECTION 10: Stability and reactivity**

10.1. Reactivity The product is stable under standard conditions (temperature, pressure) of storage and handling.

10.2. Chemical stability

The product is stable under standard conditions (temperature, pressure) of storage and handling.

10.3. Possibility of hazardous reactions No dangerous reactions known.

10.4. Conditions to avoid

Water/ moisture

Heat

10.5. Incompatible materials

Oxidizing agents

Reducing agents

Strong acids and bases

Halogens

Halogenating agents

10.6. Hazardous decomposition products

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)

(Contd. on page 11)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

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Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

Metal oxid fume

\* **SECTION 11: Toxicological information**

11.1. Information on toxicological effects

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

LD/LC50 values:

**CAS: 7440-02-0 nickel**

|      |      |                   |
|------|------|-------------------|
| Oral | LD50 | 9,000 mg/kg (rat) |
|------|------|-------------------|

Primary irritant effect:

Skin corrosion/irritation: Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

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

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

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

Carcinogenicity:

Suspected of causing cancer.

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.

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

\* **SECTION 12: Ecological information**

12.1. Toxicity

Aquatic toxicity:

**CAS: 7440-02-0 nickel**

|      |  |
|------|--|
| EC50 | >100 mg/l (Daphnia magna) (48h)                          |
|      | 0.174-0.311 mg/l (Pseudokirchneriella subcapitata) (96h) |
| LC50 | >100 mg/l (Brachydanio rerio) (96h)                      |

(Contd. on page 12)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

12.2. Persistence and degradability No further relevant information available.

12.3. Bioaccumulative potential No further relevant information available.

12.4. Mobility in soil No further relevant information available.

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5. Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6. Other adverse effects No further relevant information available.

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\* **SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Recommendation:

This material and its container must be disposed of as hazardous waste.

Hand over to officially registered waste disposal company.

Dumping into the environment must be prevented.

Waste disposal according to official state regulations.

Waste disposal key:

According to the EWC, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Uncleaned packaging:

Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

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\* **SECTION 14: Transport information**

14.1. UN-Number

ADR, ADN, IMDG, IATA

Void.

(Contd. on page 13)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

14.2. UN proper shipping name  
ADR, ADN, IMDG, IATA

Void.

14.3. Transport hazard class(es)

ADR, ADN, IMDG, IATA  
Class

Void.

14.4. Packing group  
ADR, IMDG, IATA

Void.

14.5. Environmental hazards  
Marine pollutant:

No

14.6. Special precautions for user

Not applicable.

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

Not applicable.

UN "Model Regulation":

Void.

\* **SECTION 15: Regulatory information**

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

EU-Regulations  
Regulation (EC) No 1907/2006 (REACH)  
Regulation (EC) No 1272/2008 (CLP)  
Regulation 98/24/EC (employee health protection)  
Directive 94/27/EC (Nickel Directive)

REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 27

National regulations:

Information about limitation of use:

Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.  
Employment restrictions concerning women of child-bearing age must be observed.

(Contd. on page 14)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.08.2018

Version number 2

Revision: 10.08.2018

Trade name: **FLEXICORD ROC DUR 6750 D4,75**  
**FLEXICORD ROC DUR 6750 PA D4,75**

Other regulations, limitations and prohibitive regulations: National legislation has to be observed!

15.2. Chemical safety assessment A Chemical Safety Assessment has not been carried out.

### \* SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Training hints:

The product should only be handled by persons, who were informed sufficiently about the nature of the product and about the necessary safety precautions.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

\* Data compared to the previous version altered.