

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

1.1. Product identifier

Product form : Mixture
Product name : FLEXICORD - BLACK CORUNDUM 15 D 4.75 ; FLEXICORD - BLACK CORUNDUM 50 D 4.75
Product code : 982104247000; 982104347000

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Flexible cords in thermal spray processes.

1.2.2. Uses advised against

Restrictions on use : Other uses than the identified uses indicated above.

1.3. Details of the supplier of the safety data sheet

Saint-Gobain Coating Solutions
50 rue de Mourelet Z.I. Courtine Mourre Frais,
P.O. Box 90966
FR- 84093 Avignon Cedex 9
France
T +33 (0) 4 90 85 85 00 - F +33 (0) 4 90 82 94 52
gehs.coating-solutions@saint-gobain.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD 2090 Msida	+356 2545 6508	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, the product does not present any particular risk, under normal conditions of use.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.
EUH212 - Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

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2.3. Other hazards

Other hazards which do not result in classification : In the form in which it is marketed, the product does not present a hazard to human health through inhalation, ingestion or skin contact. The organic components are decomposed during thermal spraying. The inorganic part is melted and sprayed onto the substrate to form a functional coating. The formation of inhalable TiO₂ dusts hazardous to health during thermal spraying cannot be excluded.

Component	
Aluminium oxide (1344-28-1)	PBT : Not applicable (inorganic substance) vPvB : Not applicable (inorganic substance)
Titanium dioxide (13463-67-7)	PBT : Not applicable (inorganic substance) vPvB : Not applicable (inorganic substance)
2,2',2''-nitrioltriethanol (102-71-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Aluminium oxide(1344-28-1)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Titanium dioxide(13463-67-7)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
2,2',2''-nitrioltriethanol(102-71-6)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium oxide substance with national workplace exposure limit(s) (IE)	CAS-No.: 1344-28-1 EC-No.: 215-691-6 REACH-no: 01-2119529248-35	65 – 73	Not classified
Titanium dioxide substance with national workplace exposure limit(s) (IE)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 REACH-no: 01-2119489379-17	10 – 35	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2',2''-nitrioltriethanol substance with national workplace exposure limit(s) (IE)	CAS-No.: 102-71-6 EC-No.: 203-049-8	4 – 6	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Move the affected person away from the contaminated area and into the fresh air. If symptoms persist call a doctor.
First-aid measures after skin contact	: Wash with water and soap as a precaution. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult an eye specialist.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. If you feel unwell, seek medical advice.

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

Symptoms/effects after inhalation	: In case of inhalation of dust: Cough. Respiratory complaints. Irritation of the nasal mucous membranes. Asthmatic complaints. Loss of weight.
Symptoms/effects after skin contact	: Prolonged or repeated contact with the skin may cause dermatitis.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Sand. Foam. Water spray. Dry powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	: High volume water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon oxides (CO, CO ₂). metallic oxide. Nitrous gas.
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5.3. Advice for firefighters

Firefighting instructions	: Cool down the containers exposed to heat with a water spray. Contain the extinguishing fluids by bunding.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Avoid contact with skin and eyes. Do not breathe dust.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Vacuum up the product.
Methods for cleaning up : Shovel into suitable and closed container for disposal.
Other information : Dispose of solid residues at an authorized site.

6.4. Reference to other sections

Concerning disposal elimination after cleaning, see section 13. Concerning personal protective equipment to use, see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust. Avoid contact with skin, eyes and clothing. During the thermal projection operation: Dust extraction (suction). Wear recommended personal protective equipment. Ensure good ventilation of the work station.
Hygiene measures : Do not drink, eat or smoke in the workplace. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep only in the original container in a cool well ventilated place. Store in a dry place. Observe all regulations and local requirements regarding storage of containers.
Incompatible materials : Oxidation agents. Strong acids. Strong bases.
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Aluminium oxide (1344-28-1)	
Ireland - Occupational Exposure Limits	
Local name	Aluminium oxides
OEL TWA [1]	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2021
Titanium dioxide (13463-67-7)	
Ireland - Occupational Exposure Limits	
Local name	Titanium dioxide
OEL TWA [1]	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2021

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2,2',2''-nitrilotriethanol (102-71-6)

Ireland - Occupational Exposure Limits

Local name	Triethanolamine
OEL TWA [1]	5 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

During the thermal projection operation: Safety glasses UV

8.2.2.2. Skin protection

Skin and body protection:

During the thermal projection operation: Flame retardant protective clothing. Safety foot-wear

Hand protection:

Wear suitable gloves. The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374. Breakthrough time : refer to the recommendations of the supplier. Chemically resistant protective gloves. Nitrile rubber. During the thermal projection operation: Leather protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material. Dust filter FFP3

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Outdoor. Pink. indoor. Brown.
Odour	: Odourless.
Odour threshold	: Not determined
Melting point	: 1900 – 1950 °C
Freezing point	: Not available

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Boiling point	: Not available
Flammability	: Not available
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: Not applicable.
Lower explosive limit (LEL)	: Not applicable.
Upper explosive limit (UEL)	: Not applicable.
Flash point	: Not applicable.
Auto-ignition temperature	: The product does not ignite spontaneously.
Decomposition temperature	: Not available
pH	: Not applicable.
pH solution	: Not available
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Solubility	: Water: Partially soluble
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not applicable.
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 1.95 – 2.15 at 20 °C
Relative vapour density at 20 °C	: Not applicable.
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1)	: Not applicable.
VOC content	: 0 %
Additional information	: Organic solvents : 15-25 %

SECTION 10: Stability and reactivity

10.1. Reactivity

To our knowledge, the product does not present any particular risk, under normal conditions of use.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

None to our knowledge.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Oxidation agents. Strong acids. Strong bases.

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Aluminium oxide (1344-28-1)

LD50 oral rat	> 15900 mg/kg (OECD 401)
LC50 Inhalation - Rat (Dust/Mist)	> 888 mg/m ³ air (OECD 403 method)

Titanium dioxide (13463-67-7)

LD50 oral rat	> 2000 mg/kg bodyweight (Weight of evidence) (OECD 401 method)
LC50 inhalation rat	3.43 – 5.09 mg/l/4h (OECD 403 method)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: Not applicable.
Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: Not applicable.
Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Titanium dioxide (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Technical impossibility to obtain the data)

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Viscosity, kinematic	Not applicable.
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

Titanium dioxide (13463-67-7)

EC50 Daphnia	≥ 500 mg/l/48 h (Daphnia magna) (Published data)Weight of evidence
ErC50 algae	≥ 100 mg/l/72 h (Pseudokirchneriella subcapitata)(OECD 201 method)Weight of evidence
NOEC (acute)	≥ 1000 mg/l/96h (Pimephales promelas)

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Titanium dioxide (13463-67-7)

NOEC chronic algae	≥ 100 mg/l/72 h (Pseudokirchneriella subcapitata)(OECD 201 method)Weight of evidence
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

Aluminium oxide (1344-28-1)	PBT : Not applicable (inorganic substance) vPvB : Not applicable (inorganic substance)
Titanium dioxide (13463-67-7)	PBT : Not applicable (inorganic substance) vPvB : Not applicable (inorganic substance)
2,2',2"-nitrotriethanol (102-71-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Comply with local regulations for disposal. Authorized disposal.
Product/Packaging disposal recommendations	: Completely empty the packaging prior to decontamination.
Ecology - waste materials	: Do not discharge into drains or rivers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : 0 %

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

SDS EU format according to COMMISSION REGULATION (EU) 2020/878. This sheet was updated (refer to the date at the top of this page). SDS changed sections 1, 2, 8, 9, 11, 12, 14, 15, 16.

Data sources : ECHA (European Chemicals Agency). SDS of suppliers.

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Training advice : People working with this substance have to be informed about its hazards and the means to protect themselves, particularly through the reading of the present data sheet.

Full text of H- and EUH-statements:

EUH210	Safety data sheet available on request.
EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.