



Safety Data Sheet

Regulation (EC) n. 1907/2006

Trade name: WINDFORM® FX BLACK

Current version: 4.0 issued: 28/06/2018

Replaced version: 3.0 issued: 13/04/2017

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

1.1 Product identifier

Trade name

WINDFORM® FX BLACK

1.2 Relevant identified uses of the substance or mixture

Laser sintering

1.3 Details of the supplier of the safety data sheet

Address

CRP TECHNOLOGY SRL
VIA CESARE DELLA CHIESA, 150/C
41126 MODENA
ITALY
Telephone +39 059 / 821135
Fax +39 059 / 822071

Email: info@crp.eu

1.4 Emergency telephone number

Crp Technology S.r.l. : +39 059 / 821135 – Monday-Friday 8.00am-12.30pm / 1.30pm-5.00pm
Poison Control Center - Milano Ospedale Niguarda : +39 02 66 101029

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification information

This product does not meet the classification and labelling criteria given in the Regulation (EC) N° 1272/2008 (CLP).

This product does not meet the classification and labelling criteria given in the Dangerous Preparations Directive (1999/45/EC; DPD).

2.2 Label elements

Not applicable.

Labelling information

The product does not require a hazard warning label in accordance with EC Directives.



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2.3 Other hazards

Potential health effects:

Inhalation of dust may irritate the respiratory tract.

Eye contact may cause mechanical irritation through dust particles.

Skin contact may cause mechanical irritation through dust particles.

Risk of burns to the skin due to hot melt.

Physical and chemical hazards

In the presence of an ignition source: dust may form explosive mixtures with air.

Hazardous decomposition products: see Section 10

Other:

Results of PBT and vPvB assessment: no data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Chemical characterization

Polymer based on: Polyundecanolactam (CAS No. 25035-04-5).

Hazardous ingredients

Contained substances classified as hazardous to health according to Directive 67/548/EEC as amended, or for which there are recognized exposure limits: None.

Contained substances classified as hazardous to health according to Regulation 1272/08 as amended, or for which there are recognized exposure limits: None.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of persistent adverse effects, consult a physician. Remove contaminated clothing.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air.

After skin contact

After contact with skin, wash immediately with soap and water. Remove contaminated clothing. Potential skin irritation caused by rubbing.



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After contact with molten product, cool quickly with cold water. Do not pull solidified product from skin. Seek medical attention.

After eye contact

Remove contact lenses, if present. Open eyelids widely, rinse immediately the eyes with plenty of water (15 min.). In case of persistent adverse effects, consult a physician.
Potential irritation caused by rubbing.

After ingestion

Seek medical advice immediately. Rinse immediately the mouth with plenty of water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Avoid high pressure media which could cause the formation of a potentially explosive dust-air mixture.

Suitable extinguishing media

Foam; Carbon dioxide; Extinguishing powder; Water mist.

Unsuitable extinguishing media

High volume water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO); Toxic/irritating/flammable products resulting from the combustion of organic substances.

5.3 Advice for firefighters

Wear protective clothing and use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in Sections 7 and 8. Ensure adequate ventilation.



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Avoid dust formation. Keep away sources of ignition.

For emergency responders

Personal protective equipment - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically or use appropriate vacuum equipment. When picked up, treat the recovered material as prescribed in the Section 13.

6.4 Reference to other sections

See as prescribed in the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area. Avoid the formation and deposition of dust.

Provide adequate dust extraction in the working area.

Avoid any contact with the skin and the eyes.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Provide eye wash fountain in work area. Do not inhale dust.

Use barrier skin cream. Areas of the skin soiled with dust are to be cleaned immediately with soap and water, as the powder draws out natural moisture from the skin.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air.

Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep containers dry, tightly closed, at temperatures between 5 and 35°C and relative air moisture of 20 – 70%.

Requirements for storage rooms and vessels

Store product in the original and tightly closed containers.

Advice on storage assembly

None known.



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7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limit values (dust)

ITA	Italy	Legislative Decree 9 April 2008, n.81
EU	OEL EU	Dir. 2017/164/EC; Dir. 2009/161/UE; Dir. 2006/15/EC; Dir. 2004/37/EC; Dir. 2000/39/EC.
	TLV-ACGIH	

Reference	Nation	Value	Value mg/m ³	Value ppm	Remarks
OEL	ITA	TWA	10	--	Inhalable dust
OEL	ITA	TWA	3	--	Respirable dust
ACGIH	US	TWA	10	--	Inhalable dust
ACGIH	US	TWA	3	--	Respirable dust

DNEL – Derived no-effect level

These information are not required

PNEC - Predicted no-effect concentration:

These information are not required

8.2 Exposure controls

General protection measures

Provide good ventilation and adequate dust extraction in the working area.

Wear respiratory protection mask in presence of improper ventilation or prolonged exposure to dust.

Personal protective equipment

Respiratory protection

Use respiratory protection mask with P3 particulate filter in presence of dust.

Eye / face protection

Safety glasses with side shields (EN 166).

Hand protection

Use protective gloves (DIN EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when



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physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. In case of thermal processing, thermally insulating protective gloves (EN407) are to be used.

Other

Wear a fully closed suit fire retardant. Closed ESD safety footwear (ESD according to EN 61340-4-3 or equivalent).

Skin protection

Fully closed suit.

Environmental exposure controls

See Section 6.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
Powder	
Black /dark grey	
Odour	
odourless	
Odour threshold	
Not applicable	
pH value	
Not applicable	
Boiling point / boiling range	
No data available	
Melting point / Freezing point	
No data available	
Melting point / melting range	
Value	180 °C
Method	EN ISO 11357-1
Decomposition point / decomposition range	
Value	>300°C
Flash point	
520°C (cloud, ambient pressure)	



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Minimum ignition energy	
Value	>1000mJ
Method	DIN 51794
Remarks	Minimum ignition energy with inductance: 300-1000 mJ
Auto-ignition temperature	
>400°C	
Oxidising properties	
No data available	
Explosive properties	
In the presence of an ignition source: dust may form explosive mixture in air.	
Flammability (solid, gas)	
No data available	
Lower flammability or explosive limits	
Value	60 g/m ³ (closed container)
Upper flammability or explosive limits	
No data available	
Vapour pressure	
Not applicable	
Vapour density	
Not applicable	
Evaporation rate	
Not applicable	
Relative density	
No data available	
Density	
Value	1,0 – 1,2 g/cm ³
Reference temperature	20 °C
Solubility in water	
Remarks	insoluble
Solubility(ies)	
No data available	
Partition coefficient: n-octanol/water	
No data available	



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Viscosity

No data available

9.2 Other information

Other information

No data available.

SECTION 10: Stability and reactivity

10.1 & 10.2 Reactivity & Chemical Stability

Stable under expected storage and handling conditions.

10.3 Possibility of hazardous reactions

In the presence of an ignition source: possible explosions caused by concentrations in the air > 60 g/m³

10.4 Conditions to avoid

Avoid dust formation

10.5 Incompatible materials

none, if handled according to instructions

10.6 Hazardous decomposition products

Decomposition temperature > 300°C

In case of fire CO, CO₂, toxic/irritating/flammable products resulting from the combustion of organic substances.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity
No data available
Acute dermal toxicity
No data available
Acute inhalational toxicity
No data available
Skin corrosion/irritation
No data available
Serious eye damage/irritation
No data available



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Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Reproduction toxicity
No data available
Carcinogenicity
No data available
STOT- single exposure
No data available
STOT- repeated exposure
No data available
Aspiration hazard
No data available
Symptoms related to the physical, chemical and toxicological characteristics
Eye contact may cause mechanical irritation through dust particles. Skin contact may cause mechanical irritation through dust particles.
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Inhalation of dusts may irritate the respiratory tract.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)
No data available
Toxicity to fish (chronic)
No data available
Toxicity to Daphnia (acute)
No data available
Toxicity to Daphnia (chronic)
No data available
Toxicity to algae (acute)
No data available



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Toxicity to algae (chronic)
No data available
Bacteria toxicity
No data available

12.2 Persistence and degradability

Biodegradation (on water): Inert polymer, non-biodegradable based on its structure.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Disposal or recover according to the existing national or local regulations. Remove labels from packages/containers only after thorough washing. Do not discharge product into the environment.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Do not discharge into the environment.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.



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SECTION 15: Regulatory information

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

Regulation (EC) N° 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) N° 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances subjected to the provisions of Annex XVII (restriction entries) of the REACH regulation (EC) 1907/2006.

Council Directive 2012/18/UE on the control of major-accident hazards involving dangerous substances

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

Regulation (EC) N° 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.
Directive 2017/164/EC; Directive 2009/161/UE; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

This information is based on our present state of knowledge and experience. The safety data sheet describes products with a view to the security requirements. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship. As the specific conditions of use of the product does not fall under the knowledge and control of the supplier, the user will be solely responsible for other than uses for which the product was produced.