



## Safety Data Sheet

Regulation (EC) n. 1907/2006

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**Trade name:** WINDFORM® FX BLACK

**Current version:** 3.0 issued: 13/04/2017

**Replaced version:** 2.0 issued: 06/02/2017

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### 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](mailto:info@crp.eu)

#### 1.4 Emergency telephone number

+39 059 / 821135 – Office hours Monday-Friday 8.00am-12.30pm / 1.30pm-5.00pm

### 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.

#### 2.3 Other hazards

No data available.



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### 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.

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.



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- 4.3 Indication of any immediate medical attention and special treatment needed**  
No data available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media**

Foam; Carbon dioxide; Extinguishing powder; Water mist.

**Unsuitable extinguishing media**

Water jet.

### 5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO<sub>2</sub>); Carbon monoxide (CO); Toxic/irritating/flammable products resulting from the combustion of organic substances.

### 5.3 Advice for firefighters

Protective clothing and 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. 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 8 and 13.



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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Provide good ventilation of working area, avoid any contact with the skin and the eyes, avoid the formation and deposition of dust.

Provide adequate dust extraction in the working area.

#### 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.

### 7.3 Specific end use(s)

No data available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

ACGIH Limits		
Hazardous substance	TLV-TWA (mg/m³)	TLV-STEEL * (mg/m³)
Inhalable dust	10	--
Respirable dust	3	--



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Dir. 2000/39/EC Limits		
<i>Hazardous substance</i>	<i>8 hours (mg/m³)</i>	<i>Short term (mg/m³)</i>
Inhalable dust	--	--
Respirable dust	--	--

### 8.2 Exposure controls

#### Appropriate engineering controls

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 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

No data available.



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### SECTION 9: Physical and chemical properties

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

<b>Form/Colour</b>	
Powder	
Black /dark grey	
<b>Odour</b>	
odourless	
<b>Odour threshold</b>	
Not applicable	
<b>pH value</b>	
Not applicable	
<b>Boiling point / boiling range</b>	
No data available	
<b>Melting point / Freezing point</b>	
No data available	
<b>Melting point / melting range</b>	
Value	180 °C
Method	EN ISO 11357-1
<b>Decomposition point / decomposition range</b>	
Value	>300°C
<b>Flash point</b>	
520°C (cloud, ambient pressure)	
<b>Minimum ignition energy</b>	
Value	>1000mJ
Method	DIN 51794
Remarks	Minimum ignition energy with inductance: 300-1000 mJ
<b>Auto-ignition temperature</b>	
>400°C	
<b>Oxidising properties</b>	
No data available	
<b>Explosive properties</b>	
In the presence of an ignition source: dust may form explosive mixture in air.	



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<b>Flammability (solid, gas)</b>	
No data available	
<b>Lower flammability or explosive limits</b>	
Value	60 g/m <sup>3</sup> (closed container)
<b>Upper flammability or explosive limits</b>	
No data available	
<b>Vapour pressure</b>	
Not applicable	
<b>Vapour density</b>	
Not applicable	
<b>Evaporation rate</b>	
Not applicable	
<b>Relative density</b>	
No data available	
<b>Density</b>	
Value	1,0 – 1,2 g/cm <sup>3</sup>
Reference temperature	20 °C
<b>Solubility in water</b>	
Remarks	insoluble
<b>Solubility(ies)</b>	
No data available	
<b>Partition coefficient: n-octanol/water</b>	
No data available	
<b>Viscosity</b>	
No data available	

### 9.2 Other information

#### Other information

No data available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available.



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### 10.2 Chemical stability

Stable under expected working conditions.

### 10.3 Possibility of hazardous reactions

Explosions caused by concentrations in the air > 60 g/m<sup>3</sup>

### 10.4 Conditions to avoid

Avoid dust formation

### 10.5 Incompatible materials

none, if handled according to instructions

### 10.6 Hazardous decomposition products

In case of fire CO, CO<sub>2</sub>, toxic/irritating/flammable products resulting from the combustion of organic substances.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b>
No data available
<b>Acute dermal toxicity</b>
No data available
<b>Acute inhalational toxicity</b>
No data available
<b>Skin corrosion/irritation</b>
No data available
<b>Serious eye damage/irritation</b>
No data available
<b>Respiratory or skin sensitisation</b>
No data available
<b>Germ cell mutagenicity</b>
No data available
<b>Reproduction toxicity</b>
No data available
<b>Carcinogenicity</b>
No data available





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<b>STOT- single exposure</b>
No data available
<b>STOT- repeated exposure</b>
No data available
<b>Aspiration hazard</b>
No data available
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>
Eye contact may cause mechanical irritation through dust particles. Skin contact may cause mechanical irritation through dust particles.
<b>Delayed and immediate effects as well as chronic effects from short and long-term exposure</b>
Inhalation of dusts may irritate the respiratory tract.

## SECTION 12: Ecological information

### 12.1 Toxicity

<b>Toxicity to fish (acute)</b>
No data available
<b>Toxicity to fish (chronic)</b>
No data available
<b>Toxicity to Daphnia (acute)</b>
No data available
<b>Toxicity to Daphnia (chronic)</b>
No data available
<b>Toxicity to algae (acute)</b>
No data available
<b>Toxicity to algae (chronic)</b>
No data available
<b>Bacteria toxicity</b>
No data available

### 12.2 Persistence and degradability

No data available.



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- 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.

## 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.

## SECTION 15: Regulatory information

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

<b>Regulation (EC) N° 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)</b>
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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.
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### 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 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks

Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

### 15.2 Chemical safety assessment

No data available.

## SECTION 16: Other information

### Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 1999/45/EC as amended in each case.

Regulation (EC) N° 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU.

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 security 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.

Notes section 8

\*: concentration to which workers can be exposed continuously for a short period with no irritation, chronic or irreversible tissue damage, reduced alertness.



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Main bibliographic sources:

ACGIH: Treshold Limit Value.

NIOSH Registry of toxics effects of chemical substances.

I.N.R.S. Fiche toxicologique.