

# Material Safety Data Sheet

## SECTION 1: Product and Company Identification

### 1.1. Product identification

**Commercial reference:** PETG Filament 1.75mm  
PETG Filament 2.85mm  
PETG Filament 3.00mm

### 1.2. Identified applications of the substance or mixture and not recommended uses

#### Identified key applications of the substance or mixture

**Application:** Thermal processing in the process of 3D printing.

### 1.3. Details of the supplier of the Material Safety Data Sheet

**Producer:** Devil Design Ryszka Mateja Sp. J.  
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43-190 Mikołów, Polska  
NIP: 6351837318  
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## SECTION 2: Hazard Identification

### 2.1. Classification of the substance or mixture

#### Classification according to CLP Regulation (WE No. 1272/2008)

According to the Regulation, the product Has not been classified as a dangerous material.

The data have been cited based on mixture (its components) properties.

### 2.3. Other risk

Ingestion risk. Inhalation of vapour and gas released during substance processing causes irritation of respiratory system. Gas and vapour generated during processing may cause irritation of skin and eyes.

## SECTION 3: Composition and Information on Components

### 3.2. Mixtures

#### Chemical characteristics

|                          |  |
|--------------------------|--|
| <b>Composition:</b>      | Glycol modified polyethylene terephthalate, colorant |
| <b>Chemical name:</b>    | Glycol modified polyethylene terephthalate           |
| <b>Common name:</b>      | PETG   |
| <b>Kind of material:</b> | Thermoplastic material (thermoplastic polymere)      |

#### Information on Components

| Substance name   | CAS Number  | Classification          |                            |
|------------------|-------------|-------------------------|----------------------------|
|                  |             | Directive<br>67/548/EEC | EC Regulation<br>1272/2008 |
| Neopentyl glycol | 026780-49-4 | Non-classified          | Non-classified             |

Preparation of dyestuff: SAN/PS

## SECTION 4: First Aid Measures

### 4.1. Description of first aid measures

**General information:** No extraordinary means are required.

**Skin contact:** In case of contact with melted product – immediately rinse the skin with plenty of water for at least 15 minutes. Obtain medical support.

**Eye contact:** Rinse eyes with plenty of water for at least 15 minutes. Obtain medical support.

**Respiratory duct exposure:**  
Provide fresh air supply. Immediately obtain medical support.

**Digestive tract exposure:**  
In case of ingestion do not induce vomiting unless recommended by medical staff. Immediately obtain medical support.

### 4.2. Most important acute and delayed symptoms and effects of exposure.

Unidentified – no specific symptoms were noted

#### **4.3. Indications related to any immediate medical attention or any specific treatment.**

In case of any disturbing symptoms or in case an of accident, immediately seek medical advice.

## **SECTION 5: Fire Fighting Measures**

### **5.1. Extinguishing media and fire fighting equipment**

**Appropriate extinguishing media:**

- Foam
- Carbon dioxide (CO<sub>2</sub>)
- Dry powder

**Extinguishing media that are forbidden for security reasons:**

- Strong concentrated water flow
- Sprayed water flow

### **5.2. Specific hazards related to the substance or mixture**

**Dangerous combustion residues:**

- Styrene
- Hydrogen cyanide (hydrocyanic acid)
- Acrylonitrile
- Aldehydes
- Acetic Aldehyde
- Carbon monoxide (CO)
- Carbon dioxide (CO<sub>2</sub>)
- Nitrogen oxides (NO<sub>x</sub>)
- Sulphur oxides
- Acetone
- Alcohols

The data has been cited based on component/mixture properties. Depending on the dyestuff applied, the properties may slightly differ.

### **5.3. Information for fire-fighters**

When processed clouds of combustive dust may occur. The clouds have explosive potetial in case of fire source or sparks due to electrostatic discharge.

**Personal protective equipment for fire-fighters:**

Self-contained, isolating breathing apparatus and full protective suit, protecting from skin and eye contact.

## **SECTION 6: Accidental Release Measures – relevant procedure**

### **6.1. Individual and personal precautions, protective equipment and emergency procedures**

#### **6.1.1. For non-emergency personnel**

##### **Protective equipment:**

In case of exposure to gases and vapour, apply personal respiratory protection equipment. Use personal protective equipment (see: SECTION 8).

##### **Emergency procedures:**

Remove the source of ignition. Avoid contact with skin and eyes. Avoid inhalation of gases and vapour. Due to low thermal conductivity molten product may remain hot for a certain period of time – in such case special care should be taken.

#### **6.1.2. For emergency personnel**

In case of exposure to gases and vapour, apply personal respiratory protection equipment. Use personal protective equipment (see: SECTION 8). Follow the instructions described in Section 6.1.1. “Emergency procedures”.

### **6.2. Environmental precautions**

Do not allow product to reach or penetrate soil, sewage system, surface and ground water. If the product caused environmental pollution, competent authorities should be notified.

### **6.3. Methods and materials for containment and cleaning up**

Remove mechanically.

### **6.4. Reference to other sections**

Personal Protection Equipment – see: SECTION 8.  
Waste treatment – see: SECTION 13.

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Handling the substance or preparation:**

The product must be processed in well ventilated ambience. If required, apply additional air extractor.

**General rules for work safety:**

Do not eat or drink while working with the product and in working areas. Do not smoke at workplace. After handling the product, thoroughly wash your hands and face.

**Safety guidelines on the prevention of fire and explosion**

Provide appropriate measures to avoid the accumulation of electrostatic charges. Accumulation of dust may cause the risk of fire or explosion. All possible sources of ignition and electrostatic discharge should be removed.

**7.2. Conditions for safe storage, including the information on any mutual incompatibilities**

**Technical means and conditions for storage:**

Store the product in a dry and dark place, keep it in ambient temperature, away from ignitron sources and incompatible materials (see: SECTION 7.2. Storage with other substances/preparations and SECTION 10). For quality reasons, protect product from moisture, dust and soiling.

**Storage with other substances/preparations:**

See: SECTION 10.4.

No specific rules for storage with other substances were specified.

**7.3. Specific end applications**

No recommendations were specified.

**SECTION 8: Exposure controls/personal protective equipment**

**8.1. Control parameters**

| <b>Substance name: carbon black dust</b>  |               |                                       |                    |
|---|---------------|---------------------------------------|--------------------|
| WE Number: 215-609-09   |               | CAS Reference: 1333-86-4              |                    |
| <b>Legal ground/Legal regulations</b>   | <b>Update</b> | <b>Kind of value</b>                  | <b>Value</b>       |
| Occupational concentration and exposure limits for agents and factors harmful to health for Poland. Maximum allowable concentrations and levels for harmful substances at worplace. | 29/11/2002    | Maximum allowable total concentration | 4mg/m <sup>3</sup> |

Product may release non-classified particles (PNOC).

**Values DNEL/DMEL:** No data available.

**Values for PNEC:** No data available.

Values have been specified based on the standard properties of component/mixture.

## 8.2. Exposure controls

**General rules of protection:** Product must be processed in well ventilated rooms, where capacity of the ventilation system in a room should allow air to be exchanged tenfold per hour. If required, apply additional air extractor. Directive 89/686/CEE with the relevant amendments must be respected and applied.

**Eyes and face protection:** Use safety goggles.

**Hands protection:** Use safety gloves made of leather or nitrile rubber.

**Respiratory tract protection:** In case of dust/vapours exposure, respiratory protection equipment with particle filter must be used. Use the equipment in accordance with EU 8.

## SECTION 9: Physical and Chemical Properties

### 9.1. Informacje na temat podstawowych właściwości fizycznych i chemicznych

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

|  |   |
|--|---|
| <b>State of matter:</b>                | Solid   |
| <b>Appearance:</b>                     | Wire  |
| <b>Colour:</b>                         | Colourless, and depending on the dyestuff applied it may be: white, transparent, transparent light yellow, orange, grey, transparent blue, transparent light green, transparent red or black. |
| <b>Odour:</b>                          | Sweet smell while processed   |
| <b>Smell threshold:</b>                | No data available   |
| <b>pH value:</b>                       | Not relevant  |
| <b>Melting point:</b>                  | >80°C   |
| <b>Boiling point:</b>                  | N/A   |
| <b>Evaporation rate:</b>               | N/A   |
| <b>Combustibility:</b>                 | No data available   |
| <b>Upper/lower flammability limit:</b> | No data available   |
| <b>Vapour pressure:</b>                | Not determined  |
| <b>Vapour density:</b>                 | Not determined  |
| <b>Density:</b>                        | ≥1,29 g/cm <sup>3</sup>   |

|  |                    |
|--|--------------------|
| <b>Water solubility:</b>                       | Insoluble          |
| <b>Solubility in other liquids:</b>            | No data available  |
| <b>Octanol/water partitioning coefficient:</b> | N-A                |
| <b>Self-ignition temperature:</b>              | No data available  |
| <b>Thermal degradation:</b>                    | See: SECTION 10.4. |
| <b>Viscosity:</b>                              | No data available  |
| <b>Explosive properties:</b>                   | No data available  |
| <b>Oxidising properties:</b>                   | No data available  |
| <b>Combustion properties:</b>                  | No data available  |

Depending on product colour, its physical and chemical parameters may slightly differ.

## 9.2. Other information

|                                 |                   |
|---------------------------------|-------------------|
| <b>Surface tension:</b>         | No data available |
| <b>Thermal conductivity:</b>    | Not determined    |
| <b>Electrical conductivity:</b> | Not determined    |

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

Data unavailable. See: SECTION 10.3.

### 10.2. Chemical stability

The product is stable in recommended storage conditions. See: SECTION 7.2.

### 10.3. Possibility of hazardous reactions

No dangerous reactions are known if the product is stored in recommended conditions.

### 10.4. Conditions to avoid

Electrostatic discharges. Processing the product in poorly ventilated rooms. Temperatures exceeding thermal degradation point of a masterbatch.

### 10.5. Incompatible materials

Acetic anhydride, acetone, aniline, benzene, chloroform, chromic acid, cyclohexanone, dimethylformamide, dioxane, ethyl acetate, phenylic acid, tetrahydrofuran. The product reacts with strong oxidizing agents and acids, which, due to their corrosive properties, resolve polyesters.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), acetic aldehyde.

## SECTION 11: Toxicological Information

### 11.1. Information on toxicological effects

**Acute toxicity:** LD50 >2.000 mg/kg (rat)

The product has not been tested. The values have been indicated based on the common and well known properties of mixture component(s).

**Skin irritation:** It is not known.

**Eye irritation:** It is not known.

**Skin sensitization:** It is not known.

**Mutagenicity effect:** No data available.

## SECTION 12: Ecological Information

### 12.1. Toxicity

**Effect on living organisms:** No data available.

### 12.2. Persistence and degradability

No data available.

### 12.3. Bioaccumulation ability

No data available/not determined.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of properties assessment: PBT and vPvB

No data available.

### 12.6. Other harmful or adverse effects

See: SECTION 6.2.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Do not dispose waste to sewage system. Whenever possible and permitted by legal regulations, waste should be recycled. Waste should be disposed in accordance with the locally obliging law provisions, according to EU 91/15/CEE, EU 91/689/CEE, EU 94/62/CEE Regulations with the relevant amendments. The same principles apply for packaging.

## SECTION 14: Transport Information

### Sections from 14.1. to 14.5.

|              |                     |
|--------------|---------------------|
| <b>IMDG:</b> | Without limitations |
| <b>IATA:</b> | Without limitations |
| <b>ADR:</b>  | Without limitations |
| <b>ADN:</b>  | Without limitations |
| <b>RID:</b>  | Without limitations |

The data have been cited based on the properties of mixture component(s). For the part of components the information included in Section from 14.1 to 14.5 are not available.

### 14.6. Special precautions for users

See: SECTION 6, SECTION 7 and SECTION 8.

### 14.7. Transport in bulk according to the Annex II of MARPOL73/78 and the IBC Code

There is no transport in bulk according to the IBC Code. The information has been provided and cited based on given properties of mixture component(s).

## SECTION 15: Information on Legal Regulations

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

Devil Design Ryszka Mateja Company have made every effort to assure that the information contained herein is to the best of their knowledge, in accordance with the facts, true and fair. Devil Design Ryszka Mateja Company cannot be responsible for any use that may be made of this information. The product has not been tested and any information contained in this document have been cited based on the data on the mixture component(s). Depending on

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the product specificity, especially its colour, the physical and chemical properties of the product may change; all the values listed in this document are well known and they are extreme values. Each user shall be obliged to apply the product in accordance with the locally obliging legal regulations.

Relevant and applicable legal regulations: Journal of Laws 2011 No. 63 Item 322; Journal of Laws 2009 No. 20 Item 106; Journal of Laws 2012 No. 0 Item 1018 as amended, Journal of Laws 2014 item 6; Restructured European Agreement concerning International Carriage of Dangerous Goods by Road ADR; Journal of Laws 04.96.959 as amended; Journal of Laws 2003 No. 169 item 1650.

## **15.2. Chemical safety assessment**

Up to the date of last revision, no assessment of chemical safety (CSA) is available for the substance or its components described in this document.

## **SECTION 16: Other Information**

Do not use the product for medical applications.

**The document has been drawn up by:** Devil Design Ryszka Mateja Sp. J.

**The date of last revision:** --/--/----

