

Material Safety Data Sheet

SECTION 1: Product and Company Identification

1.1. Product identification

Commercial reference: ABST Filament 1.75mm

ABST Filament 2.85mm

ABST 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 3D printing process.

1.3. Details of the supplier of the Safety Data Sheet

Producer: Devil Design Ryszka Mateja Sp. J.
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SECTION 2: Hazard Identification

2.1. Classification of the substance or mixture

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

The product has not been classified as hazardous substance.

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

2.2. Labelling elements

Labelling according to CLP Regulation (WE No. 1272/2008 Regulation). The product does not require any labelling according to the obliging EU and domestic regulations.

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

2.3. Other risk

There is ingestion risk. The inhalation of fumes and gases released during substance processing causes irritation of respiratory system. Gas and fumes generated during processing may cause irritation of skin and eyes.

SECTION 3: Composition and Information on Components

3.2. Mixtures

Composition:	Acrylonitrile, 1-3-butadiene, methyl methacrylate, styrene, colourant
Chemical name:	Acrylonitrile-1-3-butadiene-methyl methacrylate-styrene copolymer
Common name:	MABS
Kind of material:	Thermoplastic material

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 molten 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. If required, in order to help an exposed person apply artificial respiration. Immediately obtain medical support.

Digestive tract exposure:
In case of ingestion do not induce vomiting. In case vomiting appears, the head should be kept low. Immediately obtain medical support.

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

They are not known.

4.3. Indications related to any immediate medical attention and specific treatment.

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

SECTION 5: Fire Fighting Measures

5.1. Extinguishing media and fire fighting equipment

Appropriate extinguishing media:

- Sprayed water flow
- Foam
- Carbon dioxide (CO₂)
- Dry powder

Extinguishing media that are forbidden for security reasons:

- Strong concentrated water flow

5.2. Specific hazards related to the substance or mixture

Dangerous combustion residues:

- Styrene
- Hydrogen cyanide (Hydrocyanic acid)
- Acrylonitrile
- Aldehydes
- Carbon oxide (CO)
- Carbon dioxide (CO₂)
- Nitrogen oxides (NO_x)
- Sulphur oxides
- Acetone
- Alcohols

When processed and in case combustible dust is likely to occur, the dust may explode if a source of fire or sparks was caused or induced by electrostatic discharge.

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

Personal protective equipment for fire-fighters:

Apply self-contained, isolating breathing apparatus.

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.

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).

6.2. Environmental precautions

Do not allow product to reach sewage system, surface and ground water.

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, additionally apply air extractor.

General rules for work safety:

Do not eat or drink while working with the product. Do not smoke in working area. After handling the product thoroughly wash hands and face.

Safety guidelines on the prevention of fire and explosion:

Provide appropriate measures to avoid the accumulation of electrostatic charges. Keep away from sources of heat and fire.

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. 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/preparations were specified.

7.3. Specific end applications

No specific recommendations were determined.

SECTION 8: Exposure controls/personal protective equipment

8.1. Control parameters

Substance name	CAS Reference	Content
Methyl methacrylate	9011-14-7	52 ~ 65%
Acrylonitrile-butadiene-styrene	9003-56-9	33 ~ 48%
Specific anti-oxidant		0~1
Grease		0~1

Product may release non-classified particles (PNOC).

Values for DNEL/DMEL: No data available.

Values for PNEC: No data available.

Values have been specified based on the standard properties of mixture component(s).

8.2. Exposure controls

General rules of protection: Product must be processed in well ventilated rooms. If required, additionally apply an 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 (leather or nitrile rubber).

Respiratory tract protection: In case of dust/vapour exposure, respiratory protection equipment with particle filter must be used. The equipment must be applied in accordance with EU 8.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter:	Solid
Appearance:	Wire
Colour:	Colourless, and depending on the dyestuff applied it may be: transparent light yellow, transparent light blue, transparent light green.
Odour:	Irritating while processed
Smell threshold:	No data available
pH value:	Neutral
Melting point:	>105°C
Boiling point:	N/A
Evaporation rate:	N/A
Combustibility:	No data available
Upper/lower flammability limit:	No data available
Vapour pressure:	Not determined
Vapour density:	Not determined
Density:	No data available
Water solubility:	Insoluble
Solubility in other liquids:	Soluble in THF (tetrahydrofuran) and acetone
Octanol/water partitioning coefficient:	N/A
Self-ignition temperature:	No data available
Thermal degradation:	See: SECTION 10.4.
Viscosity:	No data available
Explosive properties:	No data available
Oxidising properties:	No data available

The data have been cited basing on mixture component(s) properties. Depending on product colour, its physical and chemical parameters may slightly differ.

9.2. Other information

Surface tension:	No data available
Thermal conductivity:	Not determined

Electrical conductivity: Not determined

There is no explosion risk if stored in recommended conditions. See: SECTION 7, SECTION 10.

SECTION 10: Stability and Reactivity

10.1. Reactivity

Data and details 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

Avoid electrostatic discharges, open fire and the temperatures exceeding 60°C.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Not determined.

11.1. Information on toxicological effects

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

Skin irritation: It may irritate skin.

Eye irritation: It may irritate eyes.

Skin sensitization: The product does not sensitize.

Mutagenicity effect: No data available.

The product has not been tested. The data have been cited basing on mixture component(s) properties.

SECTION 12: Ecological Information

12.1. Toxicity

Effect on living organisms: No data available.

12.2. Persistence and degradability

Physical and mechanical elimination: The product cannot be mechanically separated.

12.3. Bioaccumulation ability

The product is not bioaccumulative.

12.4. Mobility in soil

No data available.

12.5. Results of property assessments: PBT and vPvB

No data available for (or) CSR report on chemical safety is not required.

12.6. Other harmful or adverse effects

Additional notice: prevent accidental release of the product to ground water, sewage system or waste water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Do not dispose the waste to sewage system. Waste should be reprocessed according to the local legal regulations, in accordance with the following Regulations: EU 91/15/CEE, EU 91/689/CEE, EU 94/62/CEE with the relevant amendments. The same principles apply to packaging.

SECTION 14: Transport Information

Sections from 14.1. to 14.5.

IMDG: N/A Without limitations
ICAO/IATA: N/A Without limitations

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ADR\RID: N/A Without limitations

14.6. Special precautions for users

See: SECTION 6, SECTION 7 and SECTION 8.

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

No transport in bulk according to 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 regulation/legislation specific for the substance or mixture

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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

For the substance or its components described in this document no assessment of chemical safety (CSA) is available

SECTION 16: Other Information

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

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