

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Issued on December 2016  
Rev.3: April 2017

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifier

**Trade name:** ABS FILAMENT for 3D PRINTER  
**Registration number:** -  
**Synonyms:** None

**55010 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG BLACK (n)**  
**55011 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG WHITE (n)**  
**55012 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG BLUE (n)**  
**55013 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG RED (n)**  
**55014 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG GREEN (n)**  
**55015 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG TRANSPARENT (n)**  
**55016 VERBATIM 3D PRINTER FILAMENT ABS 1.75MM 1KG SILVER/METAL GREY (n)**  
**55017 VERBATIM 3D PRINTER FILAMENT ABS 2.85MM 1KG WHITE (n)**  
**55018 VERBATIM 3D PRINTER FILAMENT ABS 2.85MM 1KG BLACK (n)**

**1.2. Relevant identified uses:** 3D Printer Filament for Material Extrusion

**1.3. Supplier:** Verbatim GmbH  
**Address:** Duesseldorfer Strasse 13  
D- 65760 Eschborn, Germany  
**Email:** SDS@verbatim-europe.com  
**Emergency Telephone Number:** +49 (0) 6196 9001- 0

## 2. HAZARDS IDENTIFICATION GHS Classification:

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies:

Classification according to Regulation (EC) No 1272/2008 as amended.

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

## 2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

<b>Hazard pictograms:</b>	Not applicable
<b>Signal word:</b>	Not applicable
<b>Hazard statements:</b>	The mixture does not meet the criteria for classification.
<b>Other hazards:</b>	None known

## 2.3. Precautionary statements

<b>Safety measures:</b>	Do not breathe dust/fume/gas/mist
<b>Response:</b>	Get medical attention/advice if you feel unwell
<b>Storage:</b>	Keep away from fire. Store indoors at ambient temperature
<b>Disposal:</b>	Do not dump into sewers, on the ground or into any body of water. Burn in an adequate incinerator or bury in landfill in accordance with applicable local, state and federal regulations
<b>Supplemental label information:</b>	None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. General information for *colored* ABS:

<b>Chemical substance/mixture:</b>	A mixture
<b>Chemical properties (chemical formula, etc):</b>	Acrylonitrile-butadiene-styrene Copolymer
<b>Chemical name or generic name:</b>	No relevant Information

Description	CAS ID	EINECS No.	Content in %
Acrylonitrile-butadiene-styrene Copolymer.	9003-56-9	(C <sub>3</sub> H <sub>3</sub> N, C <sub>4</sub> H <sub>6</sub> , C <sub>8</sub> H <sub>8</sub> ) <sub>n</sub>	More than 98%
Additive & Pigment	Not disclosed	Not disclosed	Less than 2%

### 3.1.1. Health hazards elements for colored ABS:

- White filament contains titanium oxide (CAS# 13463-67- 7) less than 1%, which may be carcinogenic. (IARC: Group2B)
- Poisonous and Deleterious substances Control Law: Not applicable

### 3.2. General information for *transparent* ABS:

<b>Chemical substance/mixture:</b>	A mixture
<b>Chemical properties (chemical formula, etc):</b>	ABS-Methyl methacrylate Polymer
<b>Chemical name or generic name:</b>	No relevant Information

Description	CAS ID	EINECS No.	Content in %
ABS-Methyl methacrylate Polymer	9003-56-9	(C <sub>3</sub> H <sub>3</sub> N, C <sub>4</sub> H <sub>6</sub> , C <sub>8</sub> H <sub>8</sub> ) <sub>n</sub>	More than
Additive & Pigment	Not disclosed	Not disclosed	Less than 2%

#### 3.2.1. Health hazards elements for transparent ABS:

- Poisonous and Deleterious substances Control Law: Not applicable

## 4. FIRST AID MEASURES

**General Information:** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1 Description of first aid measures

**Inhalation:** If you feel unwell by inhalation of vapor or gas, move to fresh air and keep at rest in a position comfortable for breathing. Call a doctor if you feel unwell.

**Skin Contact:** In case of contact with melted material, fully cool down by pouring plenty of water over the clothing. Then take off clothing, cover with clean gauze and get medical attention immediately. Get medical attention if appearance changes, irritating pain occurs or feeling unwell.

**Eye contact:** Immediately rinse the eye with plenty of clean running water for at least 15 minutes. Remove contact lenses, if present and easy to do. Rinse thoroughly the inner side of the eye lid. Get medical attention as soon as possible.

**Ingestion:** If swallowed by accident, keep at rest and get medical attention immediately. Avoid vomit entering into respiratory tract. Do not induce vomiting unless instructed by a doctor.

### Further protective measures:

Wear appropriate protective equipment (protective glasses, protective mask, gloves, etc.). Install ventilation.

### 4.2 Most important symptoms and effects, both acute and delayed:

Exposure may cause temporary irritation, redness, or discomfort.

### 4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**General fire hazards:** No unusual fire or explosion hazards noted.

### 5.1 Extinguishing media:

**Suitable extinguishing media:**

Water fog. Foam, dry chemical powder, Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media:**

Do not use water jet as an extinguisher, as this will spread the fire.

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

During fire, hazardous gases may be formed

### 5.3 Special protective equipment for firefighters:

Self-contained breathing apparatus and full protective clothing must be worn in case of fire

### 5.4. Specific methods:

Use standard firefighting procedures and consider the hazards of other involved materials

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel:**

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS

**For emergency responders:**

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS

### 6.2. Environmental precautions:

Avoid discharge into drains, water courses or onto the ground

### 6.3. Methods and material for containment and cleaning up:

Stop the flow of material, if this is without risk. Following product recovery, flush area with water

### 6.4. Reference to other sections:

For personal protection, see section 8 of the SDS.  
For waste disposal, see section 13 of the SDS

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling:

Handle in a well-ventilated area. Installation of local exhaust at 3D printers area is recommended when many printers are operated at once  
Keep away from fire (ignition source) and store at ambient temperature

### 7.2. Storage:

Protect from water, moisture and direct sunlight and store indoors at ambient temperature and well-ventilated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters:

**Occupational exposure limits:**

No exposure limits noted for ingredient(s)

**Biological limit values:**

No biological exposure limits noted for the ingredient(s)

**Recommended monitoring procedures:**

Follow the standard monitoring procedures

**Derived no-effect level (DNEL):**

Not available

### 8.2. Protective equipment:

**Respiratory protection:**

Wear appropriate protective equipment to avoid inhalation or contact of gas generated from high temperature molten resin.

**Hand protection:**

Wear protective gloves. It is preferable to wear cotton work gloves or leather gloves when handling the melted resin.

**Eye protection:**

Wear protective glasses when handling.

**Skin and body protection:**

Wear clothing to avoid direct exposure of skin to molten resin.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

**Appearance:**

**Physical state:**

Filament Shape

**Colour(s)**

White, Black, Blue, Green, Red,  
Transparent, Silver/ Metal Grey

**Melting Point:**

Starts to melt between  
200°C to 260°C

**(Auto) ignition point:**

388°C

**Combustibility:**

Not self- igniting

**Specific gravity  
(relative density):**

1.20 to 1.28 g/cm<sup>3</sup>

**Solubility (water):**

Insoluble

## 10. STABILITY AND REACTIVITY

<b>10.1. Reactivity:</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability:</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid:</b>	Exposing to direct ignition sources.
<b>10.5. Incompatible materials:</b>	No data available.
<b>10.6. Hazardous decomposition products:</b>	It decomposes at high temperature heating and thereby may generate hazardous gas (e.g. Carbon Hydride or Aldehydes).
<b>10.7. Self reactivity:</b>	None

## 11. TOXICOLOGICAL INFORMATION

<b>General information:</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure:</b>	
<b>Inhalation:</b>	No adverse effects due to inhalation are expected.
<b>Skin contact:</b>	No adverse effects due to skin contact are expected
<b>Eye contact:</b>	Direct contact with eyes may cause temporary irritation
<b>Ingestion:</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure

### 11.1. Information on toxicological effects:

<b>Acute toxicity:</b>	No data available
<b>Skin corrosion/irritation:</b>	Not classified
<b>Serious eye damage/eye irritation:</b>	There is no acidity to the eye
<b>Respiratory sensitization:</b>	Not classified
<b>Skin sensitization:</b>	classification is not possible
<b>Germ cell mutagenicity:</b>	AMES Test Negative
<b>Carcinogenicity:</b>	classification is not possible
<b>Reproductive toxicity:</b>	classification is not possible
<b>Specific target organ toxicity -single exposure:</b>	classification is not possible
<b>Specific target organ toxicity - repeated exposure:</b>	classification is not possible
<b>Aspiration hazard:</b>	classification is not possible
<b>Mixture versus substance information:</b>	classification is not possible
<b>Other information:</b>	

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity:

Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible

### 12.2 Persistence and degradability:

No data is available on the degradability of this product

### 12.3 Bioaccumulative potential:

No data available

#### Partition coefficient n-octanol/water (log K<sub>ow</sub>):

Not available

#### Bioconcentration factor (BCF):

Not available

### 12.4 Mobility in soil:

No data available

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

Not available

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Residual waste:

Dispose of in accordance with local regulations

#### EU waste code:

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

#### Disposal methods/ information:

Do not dump into sewers, on the ground or into any body of water. Burn in an adequate incinerator or bury in landfill in accordance with applicable regulations.

#### Special precautions:

Dispose in accordance with all applicable regulations.

## 14. TRANSPORT INFORMATION

### Regulatory Body

### Special Provisions

**ADR**

Not regulated as dangerous goods

**RID**

Not regulated as dangerous goods

**AND**

Not regulated as dangerous goods

**IMDG**

Not regulated as dangerous goods

**IATA**

Not regulated as dangerous goods

### Transport in bulk according to Annex II of Marpol and the IBC Code:

Not applicable

## 15. REGULATORY INFORMATION

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

#### EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended: Not listed

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended: Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended: Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: Not listed

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended: Not listed

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA: Not listed

#### Authorizations:

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended: Not listed.

#### Restrictions on use:

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended: Not listed

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended: Not listed

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended: Not listed

#### Other EU regulations:

Directive 2012/18/EU on major accident hazards involving dangerous substances: Not listed

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended: Not listed

Directive 94/33/EC on the protection of young people at work, as amended: Not listed



**Other regulations:**

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

**National regulations:**

Follow national regulation for work with chemical agents.

**15.2. Chemical safety assessment:**

No Chemical Safety Assessment has been carried out

**16. Other information**

**List of abbreviations:**

Not available

**References:**

GESTIS Substance Database

*ACGIH Documentation of the Threshold Limit Values and  
Biological Exposure Indices*

*EPA: AQUIRE database*

*HSDB® - Hazardous Substances Data Bank*

*IARC Monographs. Overall Evaluation of Carcinogenicity*

*Raw material safety data sheet (SDS)*

**Information on evaluation method leading to the classification of mixture:**

Not available

**Full text of any H-statements not written out in full under Sections 2 to 15:**

None

**Disclaimer:**

This safety data sheet (SDS) is issued based on the latest reference, data etc. currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the user's responsibility to take appropriate safety measures for handling. Verbatim Limited cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.