1. Identification of the substance / preparation and of the company

1.1 Trade name
PP

1.2 Use of the product
3D printer filament

1.3 Supplier
Ultimaker B.V.
Watermolenweg 2
4191 PN, Geldermalsen
The Netherlands

Emergency phone number
In case of toxicological emergency, contact your doctor

2. Hazards identification according to regulation (EC) No 1272/2008 and GHS

2.1 Classification of the substance or mixture
Not classified

2.2 Label elements
Not applicable

2.3 Other hazards
This product is physiologically inactive and there is no hazardous effect to human health

3. Composition / information on ingredients

3.1 Composition
Not applicable

3.2 Mixture
Poly(ethylene-co-propylene) - CAS 9010-79-1

4. First-aid measures

4.1 Description of first-aid measures

General advice
If you feel unwell, seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person

Inhalation
In case of inhalation of gases released from molten filament, move person into fresh air

Skin contact
Wash with soap and water. Seek medical attention if symptoms occur. If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water – do not try to peel it off. Seek for medical attention, if necessary, for removal and treatment of the burns

Eye contact
Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Seek medical attention if symptoms persist. If molten material contacts the eye, immediately flush with plenty of water for at least 15 minutes. Seek medical attention immediately

Ingestion
Not probable. Seek medical advice in case ingestion occurs

Note to physician
Treat symptomatically
4.2 Most important symptoms and effects, both acute and delayed
Burns should be treated as thermal burns. The material will come off as healing occurs; therefore immediate removal from skin is not necessary.

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

5. Firefighting measures

5.1 General advice
Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

5.2 Extinguishing media
Carbon dioxide (CO₂), water spray, dry chemical powder

Unsuitable extinguishing media: not known

5.3 Special hazards arising from the substance or mixture
Burning produces unpleasant and toxic fumes: carbon oxides (COₓ), hydrocarbons, oxidized hydrocarbons, acetaldehyde

5.4 Advice for firefighters
Use self-contained breathing apparatus and full protective clothing

6. Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures
Avoid breathing gases released from molten filament. Ensure adequate ventilation, especially in confined areas.

6.2 Environmental precautions
No data available

6.3 Methods and materials for containment and cleaning up
Allow to solidify molten material. Dispose of waste and residue according to local regulations.

6.4 Reference to other sections
-

7. Handling and storage

7.1 Precautions for safe handling
Avoid contact with molten material.

7.2 Conditions for safe storage, including any incompatibilities
Product should be stored in a dry and cool place at temperatures between -20 to +30 °C and below 50% relative humidity. Avoid direct sunlight.

7.3 Specific end use(s)
Filament for 3D printing

8. Exposure controls / personal protection

8.1 Control parameters
None

DNEL
No data available

PNEC
No data available

8.2 Exposure controls

Eye protection
Use safety glasses for prolonged staring at printing

Skin and body protection
Good practices suggest to minimize skin contact. When material is heated, wear gloves to protect against thermal burns
Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (when applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used. Respirator type: air-purifying respirator with an appropriate government-approved (where applicable) air-purifying filter, cartridge, or canister. Contact a health and safety professional or manufacturer for specific information.

Hand protection

Follow good industrial hygiene practices.

Hygiene measures

Follow good industrial hygiene practices.

Engineering measures

Good general ventilation (typically 10 air changes per hour) is recommended. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls that maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Filament</td>
</tr>
<tr>
<td>Color</td>
<td>Natural</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Flash point</td>
<td>-</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>-</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>&gt; 300 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>&lt; 400 °C (estimation)</td>
</tr>
<tr>
<td>Melting point / range</td>
<td>123 - 165 °C</td>
</tr>
<tr>
<td>Density</td>
<td>0.89 g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Slightly soluble in organic solvents</td>
</tr>
</tbody>
</table>

9.2 Other information

-  

10. Stability

10.1 Reactivity

This product is stable if stored and handled as indicated.

10.2 Chemical stability

This product is stable if stored and handled as indicated.

10.3 Possibility of hazardous reactions

No decomposition or hazardous reactions if stored and applied as directed.

10.4 Conditions to avoid

Print temperatures above 300 °C (at standard printing speeds).

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

See 5.2.
11. Toxicological information

11.1 Information on toxicological effects

Principal routes of exposure
- Eye contact, skin contact, inhalation, ingestion

Acute toxicity
- No data available

Skin corrosion / irritation
- No data available

Serious eye damage / eye irritation
- No data available

Respiratory or skin sensitization
- No data available

Reproductive toxicity
- No data available

Carcinogenicity
- No data available

12. Ecological information

12.1 Toxicity
- No data available

12.2 Persistence and degradability
- No data available

12.3 Bio accumulative 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

13. Disposal considerations

13.1 Waste treatment methods
- In accordance with local and national regulations

14. Transport information

ADR
- Not regulated

RID
- Not regulated

IATA
- Not regulated

IMDG
- Not regulated

Special precautions for user
- Keep away from strong oxidizers and sources of ignition
15. Regulatory information

Not meant to be all-inclusive – selected regulations represented

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

US Regulations:
- Sara 313 title III
- TSCA Inventory List
- OSHA hazard category
- CERCLA
- WHMIS
- State right-to-know requirements

Other Inventories:
- Canada DSL Inventory List
- REACH / EU EINIECS
- NEHAPS
- Japan (ECL/MITI)
- Australia (AICS)
- Korean toxic substances control act (ECL)
- Philippines inventory (PICCS)
- Chinese chemical inventory (IECSC)

15.2 Chemical Safety Assessment No data available

16. Other information

The information provided in this Safety Data Sheet (SDS) is based on current knowledge and experience. This information is provided without warranty. This information should help to make an independent determination of the methods to ensure proper and safe use and disposal of the filament

Version
Version 1.003

Date
January 14, 2019