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

1.1 Trade name: ABS

1.2 Use of the product: 3D-Printer filament

1.3 Supplier: Ultimaker (Watermolenweg 2, 4191PN, 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: No risk exists to the health of users if the product is handled and processed properly

2.2 Label elements: Not applicable

2.3 Other hazards: Not known

3. Composition/information on ingredients

3.1 Composition: Not applicable

3.2 Mixture: Acrylonitrile-co-butadiene-co-styrene
Polyethylene terephthalate
Polycarbonate

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 and 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

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

5.1 Extinguishing media

Foam, carbon dioxide (CO₂), water spray, dry chemical.

Unsuitable extinguishing media: full water spray.

5.2 Special hazards arising from the substance or mixture

Burning produces obnoxious and toxic fumes: carbon oxides (COₓ).

5.3 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

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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 15 to 25 °C. Avoid direct sunlight. Minimize moisture uptake by leaving it in a sealed package together with the supplied desiccant.

7.3 Specific end use(s)

Filament for 3D printing.
8. Exposure controls/personal protection

8.1 Control parameters
DNEL: None
PNEC: None data available

8.2 Exposure controls
Eye protection Use safety glasses for prolonged stare 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 worn. 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
Appearance Filament
Color Various
Odor Slight
Flash point -
Ignition temperature -
Thermal decomposition > 280 °C
Auto-ignition temperature -
Melting point/range 225 - 245 °C
Density 1.10 g/cm³
Water solubility Insoluble
Solubility in other solvents Acetone smoothable

9.2 Other information -
11. Toxicological information

11.1 Information on toxicological effects

Principle routes of exposure
Eye contact, skin contact, inhalation, ingestion

Acute toxicity
No data available

Skin corrosion/irritation
Not irritating

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No sensitization

Reproductive toxicity
No data available

Carcinogenicity
No data available

12. Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
Difficult to degrade

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

10. Stability

10.1 Reactivity
Stable under recommended storage conditions

10.2 Chemical stability
Chemically stable

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 260 °C (at standard printing speeds)

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
See 5.2
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 Not regulated

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 Not applicable
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.

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Safety data sheet — Ultimaker ABS