

UltiMaker PPS CF

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
A safety data sheet is not required for this product. This document was created on a voluntary basis.
SDS ID: UM00014
Issue date: 04/04/2024 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : UltiMaker PPS CF

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : 3D-Printer filament

1.2.2. Uses advised against

Restrictions on use : This product must not be used in applications other than those identified above, without first seeking advice of the supplier

1.3. Details of the supplier of the safety data sheet

Supplier

UltiMaker
Watermolenweg 2
4191 PN Geldermalsen - The Netherlands
T +31 (0) 88 383 4000 (9 AM - 5 PM CET)
Product-Compliance@Ultimaker.com

1.4. Emergency telephone number

Call a doctor if you feel unwell

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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Component	
Carbon (7440-44-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Poly(thio-1,4-phenylene) (25212-74-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol (119345-01-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Vinyl polymer functionalized with Maleic anhydride (85244-45-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
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Carbon (7440-44-0)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
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Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol (119345-01-6)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Poly(thio-1,4-phenylene)	(CAS-No.) 25212-74-2 (EC-No.) 607-644-7	> 82	Not classified
Carbon	(CAS-No.) 7440-44-0 (EC-No.) 231-153-3 (REACH-no) 01-2119488894-16-0000	10	Not classified
Vinyl polymer functionalized with Maleic anhydride	(CAS-No.) 85244-45-7	< 7.5	Not classified

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Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol	(CAS-No.) 119345-01-6 (EC-No.) 432-130-2	< 0.5	Not classified
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Comments : 7,5% of the mixture consists of ingredient(s) of unknown toxicity
Contains 7,5 % of components with unknown hazards to the aquatic environment

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : No hazards which require special first aid measures.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. In molten state: Hazardous vapours may be released.
First-aid measures after skin contact : Wash skin with plenty of water and soap. Take off contaminated clothing. In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product from skin because skin will tear easily. Burns caused by molten material must be treated clinically.
First-aid measures after eye contact : Rinse eyes with water as a precaution. In the event of contact with molten product: Immediately flush eyes thoroughly with water for at least 15 minutes. Get immediate medical advice/attention.
First-aid measures after ingestion : Rinse mouth with water. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : No acute and delayed symptoms and effects are observed.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire: Water spray, Dry powder, Foam, Carbon dioxide.
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Under fire conditions, hazardous fumes will be present: Carbon dioxide, Carbon monoxide.

5.3. Advice for firefighters

Protection during firefighting : Self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment. Complete protective clothing. Cool containers / tanks with spray water if possible.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : During mechanical post processing of 3D printed parts avoid exposure to dust and apply external air extraction to outside air or a suitable filter.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment. Refer to section 8.2. Remove contaminated clothing and shoes.

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Emergency procedures : None in particular. Do not breathe dust. In molten state: Do not breathe vapours. Evacuate personnel to a safe area. Ventilate area. Wear suitable protective clothing.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so.
Methods for cleaning up : Sweep up and put in a closed container for disposal. If melted: allow liquid to solidify before taking it up.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : During mechanical post processing of 3D printed parts avoid exposure to dust and apply external air extraction to outside air or a suitable filter. Avoid dust formation. In molten state: Do not breathe vapours. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Store in a well-ventilated place. Keep container tightly closed. Keep in properly labelled containers. Avoid dust formation.
Incompatible materials : Strong oxidizing agents.
Heat and ignition sources : Keep away from heat, sparks and flames. Keep out of direct sunlight.
Storage area : Store according to local legislation.

7.3. Specific end use(s)

Not applicable.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Carbon (7440-44-0)	
United Kingdom - Occupational Exposure Limits	
Local name	Graphite
WEL TWA (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Refer to European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) or equivalent national standard(s). Refer to European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) or equivalent national standard(s). Refer to European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) or equivalent national standard(s).

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Ventilation conditions (1 printer): Provide a good standard of general ventilation, not less than 2 air changes per hour (assumes a room volume of: 30 m³).

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:			
None under normal use. In molten state: Wear eye protection			
Type	Use	Characteristics	Standard
Safety glasses with side shields	In molten state		EN 166

8.2.2.2. Skin protection

Skin and body protection:	
Wear suitable protective clothing	
Type	Standard
Long sleeved protective clothing	EN 13688

Hand protection:

None under normal conditions. Use insulated gloves when handling this material hot

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
In molten state: Chemically resistant protective gloves, Heat-resistant	Nitrile rubber (NBR)	6 (> 480 minutes)	>0.35		EN 374, EN 407

8.2.2.3. Respiratory protection

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Respiratory protection:			
None under normal use. In molten state: In case of insufficient ventilation, wear suitable respiratory equipment			
Device	Filter type	Condition	Standard
Air-Purifying Respirator (APR), disposable	Type B/P2		EN 140, EN 14387

8.2.2.4. Thermal hazards

Thermal hazard protection:

Risk of thermal burns on contact with molten product. Hazardous vapours may be released. In molten state: Wear respiratory protection/heat resistant gloves.

8.2.3. Other exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Wash hands immediately after handling the product. Take off contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Black
Odour	: Odourless
Odour threshold	: Not available
Melting point	: 282 °C
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 460 °C
pH	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Insoluble in water
Vapour pressure	: Not available
Density	: Not available
Relative density	: 1.28
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, sparks and flames.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under fire conditions, hazardous fumes will be present: Carbon dioxide, Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Carbon (7440-44-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423 method)
Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol (119345-01-6)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal))
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Carbon (7440-44-0)	
NOAEL (animal/male, F0/P)	≥ 859 mg/kg bodyweight (OECD 422 method)
Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol (119345-01-6)	
NOAEL (animal/male, F0/P)	607.85 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F0/P)	783.98 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

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STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol (119345-01-6)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))

Aspiration hazard : Not classified

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Viscosity, kinematic	Not applicable

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Contains no substances identified as having endocrine disrupting properties

11.2.2 Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol (119345-01-6)	
LC50 fish 1	> 18.65 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri), Guideline: OECD Guideline 203 (Fish, Acute Toxicity Test)
EC50 Daphnia 1	> 12.7 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test), freshwater, static
EC50 72h - Algae [1]	> 78.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test), Selenastrum capricornutum), freshwater, static, 72h
NOEC (chronic)	≥ 0.307 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	1.2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri), Guideline: OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study), freshwater, flow-through

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

Component	
Carbon (7440-44-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Contains no substances identified as having endocrine disrupting properties

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Dispose of in accordance with relevant local regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

- Overland transport
Not regulated
- Transport by sea
Not regulated
- Air transport
Not regulated
- Inland waterway transport
Not regulated
- Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

- 15.1.1. EU-Regulations
 - Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)
 - Contains no substance(s) listed on the REACH Candidate List
 - Contains no substance(s) listed on REACH Annex XIV (Authorisation List)
 - Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)
 - Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)
- 15.1.2. National regulations
 - Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:
Not applicable.

Training advice : Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure.

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
IATA	International Air Transport Association

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IMDG	International Maritime Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
PBT	Persistent Bioaccumulative Toxic
CAS-No.	Chemical Abstract Service number
SDS	Safety Data Sheet

Safety Data Sheet applicable for regions : IE - Ireland;GB - United Kingdom

SDS EU (CLP) - UM

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.