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Revision Date 27-Jan-2017

Revision B

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s)	SDS-000005 BE E RED
Denmark PR No	N/A
Product Name	ABS Red
PN (Part Number)	311-20400 333-60303 340-21204 345-10008 345-42008 350-80103 355-02114 CQ706A
Pure substance/mixture	Mixture

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

Recommended Use	3D Printing
Uses advised against	No information available

1.3. Details of the supplier of the safety data sheet

Importer

Stratasys EMEA Regional Office
Airport Boulevard B 120
77836 Rheinmünster, Germany
Phone: +49-7229-7772-0

For further information, please contact

E-mail address info@Stratasys.com

1.4. Emergency telephone number

Emergency Telephone	<ul style="list-style-type: none">+49 722 97772280 - Europe - Multi lingual response+49 722 97772281 - Global – English Language response+1 978 495 5580 - USA – Multi-lingual response+85 2 975 70887 - Asia Pacific - Multi lingual response+61 2 8011 4763 - Australia - Multi lingual response+86 15626070595 - China - Chinese response
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Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
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2.2. Label elements

Contains 2-Propenenitrile

**Signal word**

Warning

Hazard statements

H302 - Harmful if swallowed

2.3. Other hazards

If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form See section 7 for more information See section 8 for more information

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Titanium Dioxide (Bound)	236-675-5	13463-67-7	0.1 - 1	No data available	No data available
Benzene, ethenyl	202-851-5	100-42-5	< 0.05	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 2 (H361d) STOT RE 1 (H372) Flam. Liq. 3 (H226)	05-2116364815-37-0000
Aluminum oxide (Al ₂ O ₃)	215-691-6	1344-28-1	< 0.05	No data available	No data available
Hexachlorobenzene	204-273-9	118-74-1	NF	Carc. 1B (H350) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water when in contact with molten residues.
Ingestion	Drink plenty of water. Do not induce vomiting without medical advice. Call a doctor immediately.

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

Symptoms None known.

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

Note to doctors Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Foam
Water
Carbon dioxide (CO₂)
Dry chemical
Alcohol resistant foam

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical None known.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Avoid contact with skin and eyes. Remove all sources of ignition. Sweep up to prevent slipping hazard.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. Keep out of waterways.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Prevent dust cloud. Avoid dust accumulation in enclosed space. May form combustible dust concentrations in air if small particles are generated during further processing, handling or by other means. Remove all sources of ignition.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid contact with skin and eyes, when handling melted filament. If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air my form. Use respirator.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Titanium Dioxide (Bound) 13463-67-7	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³	-
Benzene, ethenyl 100-42-5	-	TWA: 100 ppm TWA: 430 mg/m ³ STEL: 250 ppm STEL: 1080 mg/m ³	TWA: 50 ppm TWA: 215 mg/m ³ TWA: 1000 mg/m ³ STEL: 1500 mg/m ³	TWA: 20 ppm TWA: 86 mg/m ³ STEL: 40 ppm STEL: 172 mg/m ³	TWA: 20 ppm TWA: 86 mg/m ³
Aluminum oxide (Al ₂ O ₃) 1344-28-1	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³	-
Hexachlorobenzene 118-74-1	-	-	-	TWA: 0.002 mg/m ³ via dérmica*	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Titanium Dioxide (Bound) 13463-67-7	-	TWA: 10 mg/m ³	-	-	TWA: 6 mg/m ³
Benzene, ethenyl 100-42-5	-	TWA: 20 ppm STEL: 40 ppm	-	TWA: 20 ppm TWA: 86 mg/m ³ STEL: 100 ppm STEL: 430 mg/m ³	Ceiling: 25 ppm Ceiling: 105 mg/m ³ H*
Aluminum oxide (Al ₂ O ₃) 1344-28-1	-	TWA: 10 mg/m ³	-	-	TWA: 5 mg/m ³ TWA: 2 mg/m ³
Hexachlorobenzene 118-74-1	-	TWA: 0.002 mg/m ³ P*	TWA: 0.03 mg/m ³	TWA: 0.002 mg/m ³ iho*	TWA: 0.025 mg/m ³ H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Titanium Dioxide (Bound) 13463-67-7	TWA: 5 mg/m ³ STEL 10 mg/m ³	TWA: 3 mg/m ³	STEL: 30 mg/m ³ TWA: 10.0 mg/m ³ TWA: 10 mg/m ³	TWA: 5 mg/m ³ STEL: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³
Benzene, ethenyl 100-42-5	TWA: 20 ppm TWA: 85 mg/m ³ STEL 80 ppm STEL 340 mg/m ³	TWA: 20 ppm TWA: 85 mg/m ³ STEL: 40 ppm STEL: 170 mg/m ³	STEL: 100 mg/m ³ TWA: 50 mg/m ³	TWA: 25 ppm TWA: 105 mg/m ³ STEL: 25 ppm STEL: 105 mg/m ³	TWA: 20 ppm TWA: 85 mg/m ³ STEL: 40 ppm STEL: 170 mg/m ³
Aluminum oxide (Al ₂ O ₃) 1344-28-1	TWA: 5 mg/m ³ STEL 10 mg/m ³	TWA: 3 mg/m ³ STEL: 24 mg/m ³	TWA: 2.5 mg/m ³ TWA: 1.2 mg/m ³	TWA: 10 mg/m ³ STEL: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³
Hexachlorobenzene	-	-	TWA: 0.5 mg/m ³	-	-

118-74-1					
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Biological occupational exposure limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Benzene, ethenyl 100-42-5	-	-	-	400 0.2	600 mg/g
Hexachlorobenzene 118-74-1	-	-	-		150 µg/L
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Benzene, ethenyl 100-42-5	-	-	-	1.2	
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Benzene, ethenyl 100-42-5	-	400 500	-	-	-
Hexachlorobenzene 118-74-1	-	150	-	-	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls If dust is generated during further processing provide exhaust ventilation.

Personal protective equipment

Eye/face protection Goggles. Safety glasses with side-shields.

Skin and body protection Impervious clothing.

Respiratory protection Minimise dust generation and accumulation. Wear respiratory protection.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Monofilament
Odour	No data available.
Colour	Characteristic
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit	No data available	

Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	380	
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity None under normal use conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat. To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Incompatible materials Oxidising agent. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products Burning produces obnoxious and toxic fumes. Carbon monoxide. Carbon dioxide (CO₂). Aldehydes.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Information on toxicological effects

Symptoms None known.

Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,895.00 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium Dioxide (Bound)	> 10000 mg/kg (Rat)		
Benzene, ethenyl	= 1000 mg/kg (Rat)		= 11.7 mg/L (Rat) 4 h
Aluminum oxide (Al ₂ O ₃)	> 5000 mg/kg (Rat)		
Hexachlorobenzene	= 3500 mg/kg (Rat)		

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitisation	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Hexachlorobenzene	Carc. 1B

Reproductive toxicity No information available.

Chemical name	European Union
Benzene, ethenyl	Repr. 2

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Unknown aquatic toxicity

Contains 99.9898 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Benzene, ethenyl	1.4: 72 h Pseudokirchneriella subcapitata mg/L EC50 0.72: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.46 - 4.3: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.15 - 3.2: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	3.24 - 4.99: 96 h Pimephales promelas mg/L LC50 flow-through 19.03 - 33.53: 96 h Lepomis macrochirus mg/L LC50 static 6.75 - 14.5: 96 h Pimephales promelas mg/L LC50 static 58.75 - 95.32: 96 h Poecilia reticulata mg/L LC50 static	-	3.3 - 7.4: 48 h Daphnia magna mg/L EC50
Hexachlorobenzene	0.01: 96 h Desmodesmus subspicatus mg/L EC50 0.03: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	1: 96 h Lepomis macrochirus mg/L LC50 flow-through 7.6: 96 h Lepomis macrochirus mg/L LC50 static 10: 96 h Pimephales promelas mg/L LC50 static 5: 48 h Oryzias latipes mg/L LC50	-	0.03: 24 h Daphnia magna mg/L EC50

12.2. Persistence and degradability**Persistence and degradability** No information available.**12.3. Bioaccumulative potential****Bioaccumulation** Not likely to bioaccumulate.**Component Information**

Chemical name	Partition coefficient
Benzene, ethenyl	2.95
Hexachlorobenzene	5.00 - 6.92

12.4. Mobility in soil**Mobility in soil** No information available.**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment** No information available.**12.6. Other adverse effects****Other adverse effects** No information available.

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances
Benzene, ethenyl	Group I Chemical	High Exposure Concern
Hexachlorobenzene	Group I Chemical	High Exposure Concern

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION
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IMDG

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

ADR

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
Benzene, ethenyl 100-42-5	RG 66, RG 84	-
Hexachlorobenzene 118-74-1	RG 9	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Hexachlorobenzene - 118-74-1	28.	

Persistent Organic Pollutants

This product contains substances which are regulated pursuant to Regulation (EC) 850/2004 of the European Parliament and of the Council on persistent organic pollutants

Chemical name	Persistent Organic Pollutants per (EC) 850/2004 - Annex Number
Hexachlorobenzene - 118-74-1	ANNEX III ANNEX I

Export Notification requirements

This product contains substances which are regulated pursuant to Regulation (EC) No. 689/2008 of the European parliament and of the council concerning the export and import of dangerous chemicals

Chemical name	European Export/Import Restrictions per (EC) 689/2008 - Annex Number
Hexachlorobenzene - 118-74-1	I.3 V

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

15.2. Chemical safety assessment

Chemical Safety Report No information available

Section 16: OTHER INFORMATION**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H332 - Harmful if inhaled
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H361d - Suspected of damaging the unborn child
 H372 - Causes damage to organs through prolonged or repeated exposure if inhaled
 H226 - Flammable liquid and vapour
 H350 - May cause cancer in contact with skin
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method

Acute inhalation toxicity - Vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
	Calculation method

Revision Date 27-Jan-2017

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet