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Revision B

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

### 1.1. Product identifier

Product Code(s)	SDS-000004 BE E DGY
Denmark PR No	N/A
Product Name	ABS Dark Gray
PN (Part Number)	311-20300 333-60308 333-90308 340-21203 345-10007 345-42007 350-80102 355-02113 CQ701A
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

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

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

<b>Acute toxicity - Oral</b>	Category 4 - (H302)
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### 2.2. Label elements

**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
Carbon mesoporous (Bound)	215-609-9 435-640-3	1333-86-4	0.1 - 1	No data available	No data available
C.I. Pigment Brown 24	269-052-1	68186-90-3	<0.1	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Aquatic Chronic 2 (H411)	No data available
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> )	215-691-6	1344-28-1	< 0.05	No data available	No data available
Copper(II) phthalocyanine	205-685-1	147-14-8	< 0.05	No data available	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**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water when in contact with molten residues.
<b>Ingestion</b>	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 (CO<sub>2</sub>)  
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 may 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 <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-
Carbon mesoporous (Bound) 1333-86-4	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	-
C.I. Pigment Brown 24 68186-90-3	-	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ) 1344-28-1	-	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Titanium Dioxide (Bound) 13463-67-7	-	TWA: 10 mg/m <sup>3</sup>	-	-	TWA: 6 mg/m <sup>3</sup>
Carbon mesoporous (Bound) 1333-86-4	-	TWA: 3.5 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>
C.I. Pigment Brown 24 68186-90-3	-	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ) 1344-28-1	-	TWA: 10 mg/m <sup>3</sup>	-	-	TWA: 5 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>
Copper(II) phthalocyanine 147-14-8	-	-	-	TWA: 1 mg/m <sup>3</sup>	-
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Titanium Dioxide (Bound) 13463-67-7	TWA: 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>	STEL: 30 mg/m <sup>3</sup> TWA: 10.0 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
Carbon mesoporous (Bound) 1333-86-4	-	-	TWA: 4.0 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 3.5 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>
C.I. Pigment Brown 24 68186-90-3	TWA: 0.5 mg/m <sup>3</sup> STEL 1.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	STEL: 30 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> STEL: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ) 1344-28-1	TWA: 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup> STEL: 24 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> TWA: 1.2 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>

Copper(II) phthalocyanine 147-14-8	TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> STEL 4 mg/m <sup>3</sup> STEL 0.4 mg/m <sup>3</sup>	-	-	-	-
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**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>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability limit:</b>	No data available	
<b>Lower flammability limit</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Insoluble in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	380	
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	No information available	
<b>Oxidising properties</b>	No information available	

**9.2. Other information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available
<b>Particle Size</b>	No information available
<b>Particle Size Distribution</b>	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 (CO<sub>2</sub>). 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) 1,884.00 mg/kg

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium Dioxide (Bound)	> 10000 mg/kg ( Rat )		
Carbon mesoporous (Bound)	> 15400 mg/kg ( Rat )	> 3 g/kg ( Rabbit )	
C.I. Pigment Brown 24	> 10000 mg/kg ( Rat )		
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> )	> 5000 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.

**Reproductive toxicity** No information available.

**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 99.8016 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Carbon mesoporous (Bound)	-	-	-	5600: 24 h Daphnia magna mg/L EC50
C.I. Pigment Brown 24	-	10000: 96 h Leuciscus idus mg/L LC50 static	-	-
Copper(II) phthalocyanine	-	100: 48 h Oryzias latipes mg/L LC50 static	-	-

### 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
Copper(II) phthalocyanine	6.6

**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.

## 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

**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
Carbon mesoporous (Bound) 1333-86-4	RG 16, RG 16bis	-

**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 does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**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**

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H411 - 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

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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