

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

- **Product identifier**

- **Trade name:** ABS-ESD7

- **Relevant identified uses of the substance or mixture and uses advised against**
 No further relevant information available.

- **Application of the substance / the preparation** Filament for Stratasys® Inc. FDM™ modeler

- **Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

Stratasys, Inc.
 7665 Commerce Way
 Eden Prairie, MN 55344
 USA

Tel +1 952 937 3000
 Fax +1 952 937 0070

In Europe:

C.S.B. GmbH
 Parkstraße 29
 D-47829 Krefeld
 Germany

Tel.: +49-2151-6520860
 Fax: +49-2151-6520869
 E-Mail: info@csb-online.de

- **Information department:** Product safety department.

- **Emergency telephone number:** see above

2 Hazards identification

- **Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void

- **Information concerning particular hazards for human and environment:**

Heightened danger of slipping when the product is spilled on the floor.

- **Classification system:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Label elements**

- **GHS label elements** Void

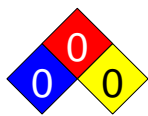
- **Hazard pictograms** Void

- **Signal word** Void

- **Hazard statements** Void

- **Classification system**

- **NFPA ratings (scale 0-4)**



Health = 0
 Fire = 0
 Reactivity = 0

- **HMIS**



Health = 0
 Fire = 0
 Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

USA

(Contd. on page 2)

Printing date 10/18/2012

Reviewed on 10/18/2012

Trade name: ABS-ESD7

(Contd. of page 1)

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** thermoplastic polymer with carbon nano tubes
- **Dangerous components:** Void

4 First aid measures

- **Description of first aid measures**
- **General information** Remove contaminated clothing.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**
Wash with soap and water.
After contact with the molten product, cool rapidly with cold water.
Do not pull solidified product away from the skin.
Call a doctor immediately.
- **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Remove contact lenses, if present and easy to do. Continue rinsing.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
Water spray
Foam
Alcohol resistant foam
- **For safety reasons unsuitable extinguishing agents**
Carbon dioxide
Extinguishing powder.
Lack of cooling capacity may permit re-ignition.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Smoke
Carbon monoxide and carbon dioxide
Hydrocarbons
Hydrogen cyanide (HCN)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.

(Contd. on page 3)

USA

Trade name: ABS-ESD7

(Contd. of page 2)

- Avoid formation of dust.*
- Do not breathe dust.*
- Avoid contact with eyes.*
- Do not breathe vapours.*
- Danger of slipping on leaked/spilled product.*
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:**
 - Pick up mechanically.*
 - Dispose of the collected material according to regulations.*
- **Reference to other sections**
 - See Section 8 for information on personal protection equipment.*
 - See Section 13 for disposal information.*

7 Handling and storage

- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.*
 - Prevent formation of dust.*
 - If dust/smoke is developed, avoid breathing dust/smoke.*
 - Avoid contact with eyes.*
 - Avoid long or repeated skin contact.*
 - Avoid contact with hot product.*
 - Make sure that all applicable workplace limits are observed.*
- **Information about protection against explosions and fires:**
 - Dust can combine with air to form an explosive mixture.*
 - Keep ignition sources away - Do not smoke.*
 - Protect against electrostatic charges.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Observe all local and national regulations for storage of water polluting products.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *Store in cool, dry conditions in well sealed receptacles.*
- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see item 7.*
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 - Observe all workplace limits for dust:*
 - TLV inhalable dust: 15 mg/m³ OSHA*
 - TLV respirable dust: 5 mg/m³ OSHA*
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 - Do not inhale dust / smoke / mist.*
 - Avoid contact with the eyes.*
 - Avoid close or long term contact with the skin.*
 - Avoid skin contact with the liquefied material.*
 - Wash hands before breaks and at the end of work.*
- **Breathing equipment:**
 - If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.*

(Contd. on page 4)

USA

Trade name: ABS-ESD7

(Contd. of page 3)

· Protection of hands:
Protective gloves
Use heat resistant gloves when handling hot/molten product.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Check the permeability prior to each renewed use of the glove.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
To avoid skin problems reduce the wearing of gloves to the required minimum.
· Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· Eye protection: *Safety glasses*
· Body protection:
Protective work clothing.
Wear heat-resistant protective clothing when handling hot/molten product.

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: *solid*
Color: *Different according to coloring*
· Odor: *weak/faint*
· Odor threshold: *no data available*
· pH-value: *Not applicable*
· Change in condition
Melting point/Melting range: *Not applicable*
Boiling point/Boiling range: *Not applicable*
· Flash point: *Not applicable*
· Flammability (solid, gaseous) *Not determined.*
· Ignition temperature: *Not determined*
· Decomposition temperature: *Not determined*
· Auto igniting: *Product is not selfigniting.*
· Danger of explosion: *Risk of dust explosion if enriched with fine dust in the presence of air*
· Explosion limits:
Lower: *Not determined.*
Upper: *Not determined*
· Oxidizing properties *not classified as oxidising*
· Vapor pressure: *Not applicable.*
· Density at 20°C (68 °F): *> 1 g/cm³ (> 8.345 lbs/gal)*

(Contd. on page 5)

USA

Printing date 10/18/2012

Reviewed on 10/18/2012

Trade name: ABS-ESD7

(Contd. of page 4)

- **Solubility in / Miscibility with Water:** *Insoluble*
- **Viscosity:**
- **dynamic:** *Not applicable*
- **kinematic:** *Not applicable*
- **Other information** *No further relevant information available.*

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
*No decomposition if used and stored according to specifications.
 Avoid impact, friction, heat, sparks, electrostatic charges.*
- **Possibility of hazardous reactions** *Toxic fumes may be released if heated above the decomposition point*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:**
*Carbon monoxide and carbon dioxide
 Hydrogen cyanide (prussic acid)
 Hydrocarbons
 Possible in traces.
 Styrene
 Acrylonitril
 Phenol
 Acetophenone
 Acrylmonomers, Acrylcompounds*

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *Dust particles may mechanically irritate the skin.*
- **on the eye:** *Dust particles may mechanically irritate the eye.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

9003-54-7	Styrene/acrylonitrile copolymer (SAN)	3
7440-48-4	Cobalt	2B, 2A

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*

(Contd. on page 6)

USA

Printing date 10/18/2012

Reviewed on 10/18/2012

Trade name: ABS-ESD7

(Contd. of page 5)

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (Self-assessment) (German regulation): slightly hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** Disposal must be made according to local/official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to local/official regulations.

14 Transport information

- | | |
|--|--|
| · UN-Number | Void |
| · DOT, ADR, IMDG, IATA | Void |
| · UN proper shipping name | Void |
| · DOT, IMDG, IATA | Void |
| · ADR | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | - |

15 Regulatory information

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

- **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act)**

9003-56-9 Acrylonitrile/butadiene/styrene copolymer

8042-47-5 White mineral oil (petroleum)

(Contd. on page 7)

USA

Printing date 10/18/2012

Reviewed on 10/18/2012

Trade name: ABS-ESD7

(Contd. of page 6)

· Cancerogenity categories**· MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· National regulations**· Disturbance regulations:** Directive 96/82/EC does not apply.**· Water hazard class:**

Water hazard class 1 (Self-assessment) (German regulation): slightly hazardous for water.

· Other regulations, limitations and prohibitive regulations

The monomer compounds of this product are listed in:

Toxic Substance Control Act TSCA (USA)

Canadian Domestic Substance List DSL

Existing and New Chemical Substance List ENCS (Japan)

Australian Inventory of Chemical Substances AICS (Australia)

Korean Existing Chemicals List KECL

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing MSDS:

C.S.B. GmbH Phone: +49 - 2151 - 652086-0
Parkstraße 29 Fax: +49 - 2151 - 652086-9
D-47829 Krefeld
Germany

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

· * Data compared to the previous version altered.

USA