

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

- **Product identifier**
- **Trade name:** ABS Model
- **Application of the substance / the preparation** Filament for MakerBot / Stratasys® Inc. FDM™ modeler
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Stratasys, Inc. Tel +1 952 937 3000
 7665 Commerce Way Fax +1 952 937 0070
 Eden Prairie, MN 55344
 USA

- In Europe:*

 C.S.B. GmbH Tel.: +49-2151-6520860
 Parkstraße 29 Fax: +49-2151-6520869
 D-47829 Krefeld E-Mail: info@csb-online.de
 Germany
- **Information department:** Product safety department.
- **Emergency telephone number:** see above

2 Composition/information on ingredients

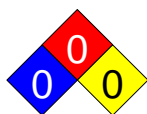
- **Chemical characterization:** Mixtures
- **Description:** Thermoplastic polymer
- **Dangerous components:** Void

- **Other components:**

9010-94-0	Butadiene-styrene-acrylonitrile-methyl methacrylate copolymer	70-75%
9003-54-7	Styrene/acrylonitrile copolymer (SAN)	25-30%

3 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

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· HMIS

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

4 First aid measures

- **General information** Remove contaminated clothing.
- **After inhalation**
Supply fresh air; consult doctor in case of complaints.
If dust or other particles are generated during processing, it is necessary to provide adequate ventilation and/or respiration protection. If dust/particles have been inhaled call physician.
- **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.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.

5 Firefighting measures

- **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.
- **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.
Avoid formation of dust.
Do not breathe dust.
Avoid contact with eyes.
Do not breathe vapours.
Particular danger of slipping on leaked/spilled product.

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- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Allow to solidify. 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.
- **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.
- **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.
- **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.
 - **Protection of hands:**
 - No chemical-protective gloves required.
 - Use heat resistant gloves when handling hot/molten product.
 - **Eye protection:** Safety glasses
 - **Body protection:**
 - Protective work clothing.

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Wear heat-resistant protective clothing when handling hot/molten product.

9 Physical and chemical properties

· General Information
· Appearance:

Form:	<i>solid</i>
Color:	<i>milky white</i>
· Odor:	<i>Nearly odorless</i>
· Odor threshold:	<i>no data available</i>

· pH-value: *Not applicable*

· Change in condition

Melting point/Melting range:	<i>Not applicable</i>
Boiling point/Boiling range:	<i>Not applicable</i>

· Flash point: *Not applicable*

· Auto igniting: *Product is not selfigniting.*

· Danger of explosion: *Product does not present an explosion hazard.
Risk of dust explosion if enriched with fine dust in the presence of air*

· Explosion limits:

Lower:	<i>Not determined</i>
Upper:	<i>Not determined</i>

· Oxidizing properties *Not applicable*

· Vapor pressure: *Not determined*

· Density at 20°C (68 °F): *> 1 g/cm³ (> 8.345 lbs/gal)*

· Solubility in / Miscibility with Water: *Insoluble*

· Segregation coefficient (n-octanol/water): *Not applicable*

· Viscosity:

dynamic:	<i>Not applicable</i>
kinematic:	<i>Not applicable</i>

· Other information *No further relevant information available.*

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

*No decomposition if used and stored according to specifications.
Avoid impact, friction, heat, sparks, electrostatic charges.*

· 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*

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Acrylmonomeres, Acrylcompounds

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11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)

· **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)

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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Additional ecological information:**

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

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. 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**

· **DOT, ADR, ADN, IMDG, IATA** Void

· **UN proper shipping name**

· **DOT, ADN, IMDG, IATA** Void

· **ADR** Void

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· Transport hazard class(es)	
· DOT, ADR, ADN, 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

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

All ingredients are listed.

· **Carcinogenicity categories**

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

None of the ingredients is listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **National regulations**

· **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 Chemical Inventory KECI

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

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Material Safety Data Sheet
*acc. to ISO/DIS 11014**Printing date 01/07/2013**Reviewed on 01/07/2013***Trade name: ABS Model**

NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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