

1 Identification of the substance/mixture and of the company/undertaking· **Product identifier**· **Trade name:** P400 ABS Model· **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.
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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**· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void· **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**· **Labelling according to EU guidelines:** Observe the general safety regulations when handling chemicals· **Classification system**· **NFPA ratings (scale 0-4)**· **HMIS**

HEALTH	0	Health = 0
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.**3 Composition/information on ingredients**· **Chemical characterization:** Mixtures· **Description:** Polymer

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· Dangerous components:			
110-30-5	N,N'-ethylenedi(stearamide)	 N R51/53	0-2%
100-41-4	Ethylbenzene	 Xn R20;  F R11	< 0.25%
· Other components:			
9003-56-9	Acrylonitrile/butadiene/styrene copolymer		97%

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 inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm. Provide medical aid.
- **After skin contact**
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.
- **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**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
Irritant gases/vapors
In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen cyanide (HCN)
Styrene
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
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.

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- Avoid contact with eyes.
- **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**
 - Prevent formation of dust.
 - If dust/smoke is developed, avoid breathing dust/smoke.
 - Avoid contact with eyes.
 - Avoid contact with hot product.
 - Make sure that all applicable workplace limits are observed.
- **Information about protection against explosions and fires:** No special measures required.
- **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 receptacle in a well ventilated area.
 - Store in cool, dry conditions in well sealed receptacles.
 - Maximum storage temperature: < 70 °C
- **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**
 - Keep away from foodstuffs, beverages and feed.
 - Do not eat, drink, smoke or sniff while working.
 - Do not inhale dust / smoke / mist.
 - Avoid contact with the eyes.
 - 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

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 · **Body protection:** *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:	<i>solid</i>
· Color:	<i>milky white</i>
· Odor:	<i>odorless</i>
· Odor threshold:	<i>no data available</i>

 · **Change in condition**

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

 · **Flash point:** *Not applicable*

 · **Flammability (solid, gaseous)** *combustible*

 · **Ignition temperature:**

 · **Decomposition temperature:** *> 300 °C (> 572 °F)*

 · **Auto igniting:** *Product is not selfigniting.*

 · **Danger of explosion:** *Product does not present an explosion hazard.*

 · **Explosion limits:**

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

 · **Oxidizing properties** *Not applicable*

 · **Vapor pressure:** *Not applicable*

 · **Density at 20 °C (68 °F):** *1.05 g/cm³ (8.762 lbs/gal)*

 · **Relative density at 20 °C (68 °F)** *1.05*

 · **Vapour density (AIR = 1)** *Not applicable*

 · **Evaporation rate** *Not applicable*

 · **Solubility in / Miscibility with**

 · **Water:** *Insoluble*

 · **Partition coefficient (n-octanol/water):** *Not determined*

 · **Viscosity:**

 · **dynamic:** *Not applicable*

 · **kinematic:** *Not applicable*

 · **Other information** *No further relevant information available.*

10 Stability and reactivity

 · **Reactivity** *No further relevant information available.*

 · **Chemical stability**

 · **Thermal decomposition / conditions to be avoided:** *Temperature over 300 °C*

 · **Possibility of hazardous reactions** *No dangerous reactions known*

 · **Conditions to avoid** *No further relevant information available.*

 · **Incompatible materials:** *Strong oxidizing agents*

 · **Hazardous decomposition products:**

 · *Irritant gases/vapors*

 · *Nitrogen oxides (NOx)*

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Carbon monoxide and carbon dioxide
 Hydrogen cyanide (prussic acid)
 Styrene

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

100-41-4 Ethylbenzene

Oral	LD50	3500 mg/kg (rat)
Dermal	LD50	15500 mg/kg (rabbit)
Inhalative	LC50/4 h	17.2 mg/l (rat)

- **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)**

100-41-4	Ethylbenzene	2B
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

100-41-4 Ethylbenzene

EC50/48 h	1.8 - 2.9 mg/l (daphnia)
IC50/72 h	4.6 mg/l (senastrum capricornutum)
LC50/96 h	94.44 mg/l (carassius auratus)
	12.1 mg/l (fathead minnow (pimephales promelas))
	4.2 mg/l (rainbow trout (oncorhynchus mykiss))

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** Does not accumulate in organisms
- **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.

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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)	Void
· DOT, ADR, IMDG, IATA	Void
· Class	Void
· Packing group	Void
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	Not applicable.
· 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.

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)

- **Carcinogenicity categories**

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

None of the ingredients is listed.

- **National regulations**

- **Water hazard class:**

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

- **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.

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