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## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

**Product Name** FDM TPU 92A Black  
**Product Code(s)** SDS-405377 EN Z BLK  
**PN (Part Number)** 333-60201

### Other means of identification

**Pure substance/mixture** Mixture

### Recommended use of the chemical and restrictions on use

**Recommended Use** Additive manufacturing  
**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### **Importer**

Objective3D Ltd  
BDO Taranaki Limited  
10 Young Street  
New Plymouth, New Plymouth 4310  
New Zealand  
Phone: +64 9 801 0380

### For further information, please contact

**Contact Point** Product Safety Department  
**E-mail address** info@Stratasys.com

### Emergency telephone number

**Emergency Telephone** +64 9 929 1483 - New Zealand - English Language response

## Section 2: HAZARDS IDENTIFICATION

### GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS)

### Label elements

### Other hazards

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required  
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

No information available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

| Chemical name             | CAS No      | Weight-% |
|---------------------------|-------------|----------|
| Non-hazardous ingredients | Proprietary | Balance  |

### Section 4: FIRST AID MEASURES

#### Description of first aid measures

|                     |   |
|---------------------|---|
| <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.                  |

#### Most important symptoms and effects, both acute and delayed

**Symptoms** None known.

#### Indication of any immediate medical attention and special treatment needed

**Note to doctors** Treat symptomatically.

### Section 5: FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

**Suitable Extinguishing Media** Foam. Water. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Alcohol resistant foam.

**Unsuitable extinguishing media** None known.

#### Specific hazards arising from the chemical

**Specific hazards arising from the chemical** None known.

#### Special protective actions for fire-fighters

**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

#### 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.

#### Environmental precautions

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

#### 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** Pick up and transfer to properly labelled containers.

#### Precautions to prevent secondary hazards

**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.

## Section 7: HANDLING AND STORAGE

#### 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.

#### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** Oxidising agent. Strong bases.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological occupational exposure limits** Not applicable.

#### Appropriate engineering controls

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

#### Individual protection measures, such as 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.

**Environmental exposure controls** No information available.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Physical state</b>  | Solid                    |
| <b>Appearance</b>      | Monofilament             |
| <b>Odour</b>           | Slight.                  |
| <b>Colour</b>          | black                    |
| <b>Odour threshold</b> | 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>      | No data available         | None known              |
| <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. |                         |

### 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

### Reactivity

**Reactivity** None under normal use conditions.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid**

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

**Incompatible materials**

**Incompatible materials** Oxidising agent. Strong bases.

**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

**Acute toxicity**

**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.

**Symptoms** None known.

**Numerical measures of toxicity - Product Information**

**Unknown acute toxicity** No information available  
 99.4 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 99.4 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 99.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 99.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)  
 99.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

*See section 16 for terms and abbreviations*

**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.

**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

### Ecotoxicity

#### Ecotoxicity

**Unknown aquatic toxicity** 99.4 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

### Other adverse effects

**Other adverse effects** No information available.

## Section 13: DISPOSAL CONSIDERATIONS

### 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

### Road transport

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
No information available

## Section 15: REGULATORY INFORMATION

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

**New Zealand****Exposure Limits**

See Section 8 for any applicable Tolerable Exposure or Environmental Exposure Limits

**Certified handlers, tracking and controlled substance licence requirements**

- Certified handlers are required for some substances. This includes for substances requiring a controlled substance licence, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information.
- Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.
- Controlled substance licences are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information.

**International Inventories**

|                      |                          |
|----------------------|--------------------------|
| <b>NZIoC</b>         | No information available |
| <b>TSCA</b>          | Complies                 |
| <b>DSL/NDSL</b>      | Complies                 |
| <b>EINECS/ELINCS</b> | Complies                 |
| <b>ENCS</b>          | Complies                 |
| <b>IECSC</b>         | Complies                 |
| <b>KECL</b>          | Complies                 |
| <b>PICCS</b>         | Complies                 |
| <b>AICS</b>          | Complies                 |

**Legend:**

**NZIoC** - New Zealand Inventory of Chemicals

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**International Regulations**

**Ozone-depleting substances (ODS)** Not applicable

**Persistent Organic Pollutants** Not applicable

**Export Notification requirements** Not applicable

**Section 16: OTHER INFORMATION**

**Revision Date** 02-Dec-2018

**Revision Note**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

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**End of Safety Data Sheet**