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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

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water when in contact with molten residues.
Ingestion	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.
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Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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Section 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Foam. Water. Carbon dioxide (CO₂). 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

Physical state	Solid
Appearance	Monofilament
Odour	Slight.
Colour	black
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit	No data available	
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available.	
Oxidising properties	No information available.	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available
Particle Size	No information available
Particle Size Distribution	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 (CO₂). 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

NZIoC	No information available
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	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		

Disclaimer

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End of Safety Data Sheet