

PREMIUM 3D FILAMENTS—HIPS

HIPS

Safety Data Sheet

Section 1: Identification**Product Identifier and Other Means of Identification****Product Name:** Premium 3D Filaments-HIPS**SDS Code:** HIPS**Related Part #** HIP17WH5, HIP30WH5**Recommended Use and Restriction on Use****Use:** Filament for 3D printing-HIPS**Uses Advised Against:** Not available**Details of Manufacturer or Importer****Manufacturer**MG Chemicals
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Burlington, Ontario L7L 5R6
CANADAMG Chemicals (Head Office)
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Surrey, British Columbia V4N 4E7
CANADA**☎** +1-800-340-0772**☎** +1-905-331-1396**FAX** +1-800-340-0773**FAX** +1-905-331-2682**E-MAIL** support@mgchemicals.com**E-MAIL** info@mgchemicals.com**WEB** www.mgchemicals.com**E-MAIL** (Competent Person): sds@mgchemicals.com**Emergency Phone Number****For hazardous material incidents ONLY**—leaks, spills, fires, exposures or accidents
USA or CANADA: Call CHEMTREC ☎: **+1-800-424-9300****For emergencies involving dangerous goods;** Collect 24/7CANADA: Call CANUTEC ☎: **+1-613-996-6666** or ***666** on cellular phones

PREMIUM 3D FILAMENTS—HIPS

HIPS

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Non-hazardous—does not meet WHMIS or OSHA GHS classification criteria.

Label Elements

Signal Word	<i>None Mandated</i>
Pictograms	Hazard Statements
<i>None mandated</i>	None

Hazards Not Otherwise Classified

Not applicable.

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	Wt%
9003-55-8	Styrene-butadiene copolymer ^{a)}	98-100%

a) Non-hazardous component

PREMIUM 3D FILAMENTS—HIPS**HIPS****Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
IF IN EYES	P305 + P351 + P338
Immediate Symptoms	<i>mild irritation</i>
Response	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED	P301 + P310
Immediate Symptoms	<i>none known or expected</i>
Response	IF SWALLOWED: Rinse mouth.
IF ON SKIN	P302 + P352, P332 + P313, P314, P362 + P364
Immediate Symptoms	<i>None known or expected</i>
Response	No action are required or suggested.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	<i>None known or expected</i>
Response	Remove person to fresh air and keep comfortable for breathing.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. If in a molten state, do not apply direct water stream.
Specific Hazards	See combustion products.
Combustion Products	Produces carbon oxides (CO,CO ₂), with traces of styrene and ethylbenzene.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

PREMIUM 3D FILAMENTS—HIPS**HIPS****Section 6: Accidental Release Measures**

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Not applicable
Environmental Precautions	Not applicable
Containment Methods	Not applicable
Cleaning Methods	Reclaim material if possible. Wash spill area with soap and water.
Disposal Methods	May be disposed of as regular waste.

Section 7: Handling and Storage

Prevention	Avoid breathing fumes.
Handling	Wash hands thoroughly after handling.
Storage	Not applicable.

Section 8: Exposure Controls/Personal Protection**Substances with Occupational Exposure Limit Values**

This product contains no substances with occupational exposure limits.

Section continued on next page

PREMIUM 3D FILAMENTS—HIPS**HIPS****Engineering Controls**

Ventilation General ventilation is adequate for normal use; keep overall exposure as low as possible.

Personal Protective Equipment

Eye protection Wear appropriate protective eyeglasses or chemical safety goggles.
Recommendation: Ensure that glasses have side shields for lateral protection.

Skin Protection No skin protection required.

Respiratory Protection For over-exposures to dust/vapors/fumes, wear respirator such as a half-mask respirator with organic vapor cartridges.
For exposure to combustion products, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.
RECOMMENDATION: Consult your local safety supply store to ensure your respirator has filter cartridges appropriate for the ingredients listed in section 3 of this SDS, and that the respirator is fitted to the employee by a professional.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

PREMIUM 3D FILAMENTS—HIPS
HIPS
Section 9: Physical and Chemical Properties

Physical State	Solid	Lower Flammability Limit	Not applicable
Appearance	Off white	Upper Flammability Limit	Not applicable
Odor	Odorless	Vapor Pressure @20 °C^{b)}	Not available
Odor Threshold	Not available	Vapor Density	Not applicable
pH	Not available	Relative Gravity @25 °C	1.04
Freezing/Melting Point	≥180 °C [≥356 °F]	Solubility in Water	Insoluble
Initial Boiling Point	Not available	Partition Coefficient n-octanol/water	Not available
Flash Point	350 °C [662 °F]	Auto-ignition Temperature^{c)}	≥400 °C [≥752 °F]
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability (solid, gas)	Not available	Viscosity @40 °C	Not applicable

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures. When heated at 200 °C and above, it may release residual styrene and ethylbenzene.
Conditions to Avoid	Incompatible substances, open flames, and temperatures above 300 °C [572 °F]
Incompatibilities	None known
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5

PREMIUM 3D FILAMENTS—HIPS**HIPS****Section 11: Toxicological Information****Summary of Effects and Symptoms by Routes of Exposure**

Eyes	Under normal conditions, no effect known or expected.
Skin	Under normal conditions, no effect known or expected.
Inhalation	Under normal conditions, no effect known or expected.
Ingestion	May cause gastrointestinal blockage.
Chronic	No effect known

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
Styrene-butadiene copolymer	Not available	Not available	Not available

Note: Toxicity data from the RTECS database accessed through the Canadian Centre for Occupational Health and Safety (CCOHS)² were consulted. The data from supplier (M)SDS were also consulted.

Other Toxicological Effects

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.
Carcinogenicity (risk of cancer)	None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.

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PREMIUM 3D FILAMENTS—HIPS**HIPS**

Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	Based on available data, the classification criteria are not met.
Teratogenicity (risk of fetus malformation)	Based on available data, the classification criteria are not met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not applicable—solid substance

Section 12: Ecological Information

The IMDG Code criteria, the raw-material safety data sheets, and supporting data from the European Chemical Agency database (<http://echa.europa.eu>) were used to support the classification.

The component substances are not classifiable as an environmental toxicant.

Acute Ecotoxicity

No data available.

Chronic Ecotoxicity

Available data doesn't give rise to classification as a chronic ecotoxicant.

Biodegradability

Not readily biodegradable

Bioaccumulation

No data available

Other Effects

None known

PREMIUM 3D FILAMENTS—HIPS**HIPS****Section 13: Disposal Information**

Dispose of contents in accordance with all local, regional, national, and international regulations.

Section 14: Transport Information**Ground**

Refer to TDG (Canadian Transportation of Dangerous Goods regulations) and **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Not Regulated	
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Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Not Regulated	
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Sea

Refer to IMDG regulations.

Not Regulated	
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Section 15: Regulatory Information**Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

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PREMIUM 3D FILAMENTS—HIPS**HIPS****USA****CAA** (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain substances that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains does not contain substances which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity).

When heated for 3D printing, this product may release residual amounts of styrene (CAS # 100-42-5) and ethylbenzene (CAS # 100-41-4), which are listed as a carcinogen.

Europe**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by	Michel Hachey
Date of Creation	05 February 2019
Supersedes	22 December 2014
Reason for Changes:	Change to Section 15, California Proposition 65.

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PREMIUM 3D FILAMENTS—HIPS**HIPS****Reference**

- 1) ACGIH 2017 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2017).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

Technical Queries Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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