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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: <u>Toner Plastics ABS Filament</u>

SYNONYMS: Toner Plastics ABS 3D Printing Filament

MANUFACTURER: ADDRESS:	Toner Plastics, Inc. 35 Industrial Drive East Longmeadow, MA 01001	
EMERGENCY PHONE: OTHER CALLS: HOMEPAGE: CONTACTS:	413-525-2369 413-525-2369 <u>www.tonerplastics.com</u> Michael Reed - Manufacturing Engineer	mr@tonerplastics.com

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

This product is not classified according to 29 CFR 1910.1200 Hazard Communication Standard.

POTENTIAL HEALTH EFFECTS:

EYES:	None
SKIN:	None
INGESTION:	None
INHALATION:	None

CHRONIC HEALTH HAZARDS: See section 11 for more information.

OTHER HAZARDS: Dust that may be generated from processing or other means may become combustible.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	%WT
Styrene-acrylonitrile-butadiene copolymer	9003-56-9	>98%
Styrene	100-42-5	<.1%

SECTION 4: FIRST AID MEASURES

EYE CONTACT:	Rinse immediately with water for 15 minutes. Call a physician immediately.
SKIN CONTACT:	Not expected to cause irritation. After contact with skin, wash
	immediately with water. If irritation persists, contact a physician.
INGESTION:	Drink water as a precaution. Do not induce vomiting without medical
	advice. Call a physician immediately.
INHALATION:	Move to fresh air. Call a physician.
NOTES TO	Treat symptomatically, decontamination,
PHYSICIANS:	vital functions.

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SECTION 5: FIRE-FIGHTING MEASURES

FLAMABILITY CLASS: 1

EXTINGUISHING MEDIA: Foam, Water, Carbon Dioxide (CO2), Dry Chemical

SPECIAL PROTECTIVE EQUIPMENT: Wear self-contained breathing apparatus, MSHA/NIOSH approved full protective gear.

UNDER FIRE CONDIDITONS: Fine dust may ignite.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. Avoid contact with skin and eyes. Sweep up to prevent slipping. Avoid dust formation and all sources of ignition.

ENVIRONMENTAL PRECAUTIONS: Do not allow material to contaminate ground water.

METHODS FOR CLEANING UP: Exercise good housekeeping practices. Collect in suitable containers for disposal.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING: Avoid contact with skin and eyes. Use personal protective equipment to protect against the possibility of contact with molten material. Avoid dust formation. Avoid overheating.

STORAGE: Store in a cool, dry place. Avoid UV exposure.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Occupational Exposure Limit Values:

CAS No.	Designation	Туре	Limit value
100-42-5	Styrene	OSHA: Ceiling	200 ppm
		USA: ACGIH: STEL	170 mg/m³, 40 ppm
		USA: ACGIH: TWA	85 mg/m ³ , 20 ppm
		USA: NIOSH: STEL	425 mg/m³, 100 ppm
		USA: NIOSH: TWA	215 mg/m ³ , 50 ppm
		USA: OSHA: TWA	100 ppm

Biological Limit Values:

CAS No.	Designation	Туре	Limit value	Parameter	Sampling
100-42-5	Styrene	USA: ACGIH-BEI, blood	0.2 mg/L	Styrene in venous blood	End of exposure or end of shift
		USA: ACGIH-BEI, urine	400 mg/g creatinine	Mandelic acid + phenylglyoxylic acid	End of exposure or end of shift

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ENGINEERING CONTROLS:

RESPIRATORY PROTECTION:

EYE PROTECTION: SKIN PROTECTION: WORK HYGIENIC PRACTICES: Provide good ventilation. Additional controls are not normally necessary. Local exhaust ventilation may be required during processing. Respiratory protection must be worn whenever TLV levels have been exceeded. Use Filter type A-P2. Safety glasses with side shields. Impervious clothing. Avoid contact with skin, eyes, and clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Cord
ODOR:	Weak
PHYSICAL STATE:	Solid
PH:	NA
DENSITY:	1.04 g/cm ³
DECOMPOSITION TEMP:	572°F
MELTING POINT/RANGE:	212°F
AUTOIGNITION TEMP:	752°F
WATER SOLUBILITY:	Insoluble
SOLUBILITY IN OTHER SOLVENTS:	Not determined

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Not expected under normal conditions.
CONDITIONS TO AVOID:	Avoid temperatures above the decomposition temperature (250°C).
MATERIALS TO AVOID:	Oxidizing agents.

Hazardous decomposition products: Hydrogen cyanide, carbon monoxide, carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

PRINCIPAL ROUTES OF EXPOSURE: Eye contact, skin contact, inhalation, ingestion.

ACUTE TOXICITY: Lack of data.

LOCAL EFFECTS: Dust may be irritating to eyes, skin, and respiratory system.

SPECIFIC EFFECTS: May cause skin irritation. Fumes may cause respiratory tract irritation.

LONG TERM TOXICITY: None found.

MUTAGENIC EFFECTS: None found.

REPRODUCTIVE TOXICITY: None found.

CARCINOGENIC EFFECTS: None found.

TARGET ORGAN EFFECTS: Lack of data.

SKIN: Lack of data.

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INGESTION: Lack of data.

STYRENE: Harmful if inhaled. Can cause damage to organs with repeat exposure. May be fatal if swallowed and enters airways. Symptoms: Skin, eye, respiratory tract irritation. Swallowing may cause gastrointestinal irritation and pain.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY EFFECTS: No evidence.

PERSISTANCE AND DEGRADABILITY: Not readily biodegradable.

BIOACCUMULATION: Not expected.

MOBILITY: No data.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: In accordance with local and federal regulations.

SECTION 14: TRANSPORT INFORMATION

NOTES: Not regulated by the US Department of Transportation.

SECTION 15: REGULATORY INFORMATION

FEDERAL REGULATIONS:

Styrene:

TSCA Inventory List: Listed Carcinogen Status: IARC Rating: Group 2B Clean Air Act: Hazardous Air Pollutants: Code XOV SOCMI Chemical: Yes Clean Water Act: Hazardous Substance: RQ 1000lbs Other: CERCLA: RQ 1000lbs RCRA: Methods 8020, 8240 / PQL 1, 5 SARA Title III Section 313: Conc 0.1% / Threshold Standard NIOSH Recommendations: Occupational Health Guideline: 0571

STATE REGULATIONS:

California Proposition 65: This product contains a chemical(s) known to The State of California to cause cancer and birth defects or other reproductive harm.

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SECTION 16: OTHER INFORMATION

Disclaimer: The information herein given is in good faith, but no warranty, express or implied, is made. Consult the company for further information.

Notice Regarding Medical Application Restrictions: The company does not recommend any of its products, including samples, for use (A) in any application which is intended for any internal contact with human bodily fluid or body tissues, (B) as a critical component in any medical device that supports or sustains human life, and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.