Polymerland, Inc.

MATERIAL SAFETY DATA SHEET

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1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

MANUFACTURER / SUPPLIER

Polymerland, Inc.
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USA

FAX 304 503 366-9506

EMERGENCY TELEPHONE

(800) 447-4545 (24 hour)
(800) 424-9300 (24 hour)

Medical (800) 447-4545 (24 hour)
CHEMTREC (800) 424-9300 (24 hour)

NON-EMERGENCY TELEPHONE

(800) 752-7842 (304) 424-5411

PRODUCT IDENTIFIER: POLYMERLAND RESIN

PRODUCT DESCRIPTION: Acrylonitrile-butadiene-styrene terpolymer (ABS) (CAS# 9003-56-9).

PRODUCT USE: May be used to produce molded or extruded articles or as a component of other industrial products.

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product consists primarily of high molecular weight polymers. Substances listed below are reportable hazardous ingredients as defined by The OSHA Hazard Communication Standard. Exposure limits, when available, are also listed. Styrene, if present,is listed below based upon its IARC classification as a possible carcinogen.

Additional compositional data are also provided in Section 15, REGULATORY INFORMATION, subject to supplier notification requirements.

CAS NUMBER / CHEMICAL NAME	OSHA	UNITS	ACGIH	UNITS
13463-67-7 Titanium dioxide (Ti O2)	10.0	mg/m3 PEL /	10.0	mg/m3 TLV
1333-86-4 carbon black	3.5	mg/m3 PEL	3.5	mg/m3 TLV
100-42-5 styrene	50.0	ppm PEL	50.0	ppm TLV
	100.0	ppm STEL	100.0	ppm STEL

RECEIVE
BY:

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Solid pellets with slight or no odor. Spilled pellets create slipping hazard. Can burn in a fire creating dense toxic smoke. Molten plastic can cause severe thermal burns. Fumes produced during melt processing may cause eye, skin and respiratory tract irritation. Secondary operations, such as grinding, sanding or sawing, can produce dust which may present an explosion or respiratory hazard.

POTENTIAL HEALTH EFFECTS

EYE: Product may cause irritation or injury due to mechanical action.

SKIN: Pellets not likely to cause skin irritation.

INGESTION: Not acutely toxic.

INHALATION: Pellet inhalation unlikely due to physical form.

CHRONIC/CARCINOGENICITY

NTP: Not Tested
OSHA: Not Regulated
IARC: Listed
MELT PROCESSING HEALTH EFFECTS: Molten plastic can cause severe burns.

Processing fumes may cause irritation to the eyes, skin and respiratory tract, and in cases of severe over-exposure, nausea and headache.

Grease-like processing fume condensates on ventilation duct work, molds and other surfaces can cause irritation and injury to skin.

MEDICAL RESTRICTIONS: There are no known human health effects aggravated by exposure to this product. However, certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing fumes.

NOTE: OSHA, IARC and/or NTP have listed carbon black and heavy metals, present in some colorants, as carcinogens. If these colorants are present in this product, they are shown in SECTION 2. These colorants are essentially bound to the plastic matrix and are unlikely to contribute to workplace exposure under recommended processing conditions.

4. FIRST AID MEASURES

EYES: Remove contact lenses at once. Immediately flush eyes well with copious quantities of water or normal saline for at least 20-30 minutes. If irritation persists, seek medical attention.

SKIN: Wash skin thoroughly with soap and water. Seek medical attention if rash or burn occurs.

INGESTION: Not probable. If a large amount is swallowed, seek medical attention.

INHALATION: Not likely to be inhaled due to physical form.

MELT PROCESSING: For molten plastic skin contact, cool rapidly with water and immediately seek medical attention. Do not attempt removal of plastic without medical assistance. Do not use solvent for removal.

For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop seek medical attention at once, even if symptoms develop at a later time.

For skin contact with fume condensate, immediately wash thoroughly with soap and water. If irritation develops seek medical attention.

5. FIRE FIGHTING MEASURES

FIRE FIGHTING: Approved pressure demand breathing apparatus and protective clothing should be used for all fires. Water spray is the preferred extinguishing medium. This product will melt but will not be carried on the surface of water.

EXTINGUISHING MEDIA: Water spray and foam. Water is the best extinguishing medium. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition.

HAZARDOUS COMBUSTION PRODUCTS: Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, hydrogen cyanide, hydrocarbon fragments and carbon dioxide.

FLASH POINT: Not Applicable
LOWER FLAMMABLE LIMIT: Not Established
UPPER FLAMMABLE LIMIT: Not Established
AUTOIGNITION: 508C (946F), estimated
CONDITIONS OF FLAMMABILITY: Requires a continuous flame source to ignite.
EXPLOSION DATA
IMPACT SENSITIVITY: Not sensitive to mechanical impact.
STATIC DISCHARGE: Not sensitive to static discharge.

(See HANDLING AND STORAGE)

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Sweep or gather up material and place in proper container for disposal or recovery. (See DISPOSAL INFORMATION)

7. HANDLING AND STORAGE

HANDLING: Follow recommendations on label and in

processing guide. Prevent contact with skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Secondary operations such as grinding, sanding or sawing may produce a dust explosion hazard. Use aggressive housekeeping activities to prevent dust accumulation; employ bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices.

STORAGE: Store in a dry place away from moisture, excessive heat and sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: A continuous supply of fresh air to the workplace together with removal of processing fumes through exhaust systems is recommended. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, duct work and other surfaces using appropriate personal protection. For powders and residual dusts refer to HANDLING AND STORAGE section.

Ventilation requirements must be locally determined to limit exposure to processing fumes in the workplace. Design techniques and guidelines may be found in publications such as:

Industrial Ventilation; available from the American Conference of Governmental Industrial Hygienists, Committee on Industrial Ventilation, P.O. Box 16153, Lansing, MI 48901.

PERSONAL PROTECTION

EYE/FACE: Wear safety glasses with side shields or chemical goggles. In addition, use full face shield when cleaning processing fume condensates from hoods, ducts and other surfaces.

SKIN: When handling pellets avoid prolonged or repeated contact with skin. When melt processing product wear long pants, long sleeves, well insulated gloves and face shield when applicable. Use appropriate protective clothing, including chemical resistant gloves, to prevent any contact with processing fume condensates.

RESPIRATORY: When processing fumes are not adequately controlled, use respirator approved for protection from organic vapors and acid gases. When dust or powder from secondary operations, such as grinding sanding or sawing, are not adequately controlled use respirator approved for protection from dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
ODOR AND APPEARANCE:	Plastic pellet with slight odor.
BOILING POINT:	Not Applicable
MELTING POINT:	See COMMENT below.
VAPOR PRESSURE (mmHg):	Negligible
VAPOR DENSITY (air=1):	Not Applicable
SPECIFIC GRAVITY (water=1):	>1
WATER SOLUBILITY:	Insoluble
% VOLATILES:	Negligible
pH:	Not Applicable
ODOR THRESHOLD:	Not Established
EVAPORATION RATE:	Negligible
COEFFICIENT WATER/OIL DISTR:	Not Established
COMMENT:	This product does not exhibit a sharp melting point, but softens gradually over a wide temperature range.

10. STABILITY AND REACTIVITY

STABILITY: Stable under recommended conditions of storage and handling.

REACTIVITY: Not reactive under recommended conditions of handling, storage, processing and use.

CONDITIONS TO AVOID: Do not exceed melt temperature recommendations in product literature. In order to avoid autoignition/ hazardous decomposition of hot thick masses of plastic, purgings should be collected in small, flat shapes or thin strands to allow for rapid cooling and quench in water. Do not allow product to remain in barrel at elevated temperatures for extended periods of time; purge with a general purpose resin. (See EXPOSURE CONTROLS/PERSONAL PROTECTION section for respiratory protection advice.)

HAZARDOUS DECOMPOSITION: Processing fumes evolved at recommended

processing conditions may include trace levels of styrene, acrylonitrile, acrolein, acetaldehyde, acetophenone, ethylbenzene, cumene, 4-vinylcyclohexene and phenols.

11. TOXICOLOGICAL INFORMATION

PRODUCT:
ACUTE ORAL: Oral LD50 (Rat) >5 g/kg, estimated.
COMPONENTS:
Styrene monomer is listed as a possible carcinogen by IARC. Rats exposed to acrylonitrile by inhalation or ingestion induced brain, zymball gland (no comparable human gland) and stomach tumors.

12. ECOLOGICAL INFORMATION

GENERAL: Not expected to present any significant ecological problems.

13. DISPOSAL INFORMATION

RCRA HAZARDOUS WASTE: Product is not a RCRA hazardous waste.
WASTE DISPOSAL: Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates should be tested to determine waste classification.

14. TRANSPORTATION INFORMATION

DOT HAZARD CLASS: Not Regulated
PROPER SHIPPING NAME: Not Regulated
IDENTIFICATION NUMBER: Not Listed
TDGA: Not Listed

15. REGULATORY INFORMATION

Listed below are chemical substances subject to supplier notification requirements. The percentages, when present, represent average values.

CAS NUMBER / CHEMICAL NAME	EPCRA 313,%	WHMIS %	NPRI %	CA-65 %	FL RI
CR(3) chromium (III) compound(s)					X
100-40-3 4-ethenylcyclohexene				< 0.1	
100-42-5 styrene	0.5				
107-13-1 acrylonitrile				< 0.1	X
13463-67-7 Titanium dioxide (Ti O2)					X

CA-65: Chemical substances identified under the California Proposition 65 column are known to the State of California to cause cancer and/or reproductive toxicity.
TSCA STATUS: This product complies with the Chemical Substance Inventory requirements of the US EPA Toxic Substances Control Act (TSCA).
WHMIS CLASSIFICATION: Not a controlled product.

16. OTHER

PREPARED BY: Product Compliance

The above information and recommendations are believed accurate and reliable. Because it is not possible to anticipate all conditions of use additional safety precautions may be required. POLYMERLAND INC. makes no warranty, either express or implied, including merchantability and fitness.
USER RESPONSIBILITY: Each user should read and understand this information and incorporate it into individual site safety programs in accordance with applicable hazard communication standards and regulations.

ABBREVIATIONS:
ACGIH: American Conference of Governmental Industrial Hygienists
CA-65: California Proposition 65 (Safe Drinking Water & Toxic Enforcement Act)

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CAS #: Chemical Abstracts Service number.
EPCRA 313: Emergency Planning and Community Right-To-Know Act, Section 313.
FL: Florida Right-To-Know Law, Substance List.
OSHA: The Occupational Safety and Health Administration.
NPRI: The Canadian National Pollutant Release Inventory.
RCRA: Resource Conservation and Recovery Act.
RI: Rhode Island Right-To-Know Law, Hazardous Substance List.
WHMIS: Canadian Workplace Hazardous Materials Information System

REVISIONS IN THIS MSDS SINCE YOUR LAST ORDER ARE IN THE FOLLOWING SECTION(S):