Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

General Electric Co.
One Plastics Ave.
Pittsfield, MA 01201

GE Plastics Canada, Ltd.
2300 Meadowvale Blvd.
Mississauga, ONT L5N 5P2

PHONE NUMBERS

Emergency Medical (24 HOUR)
Emergency Transportation/CHEMTREC (24 HOUR)
Other Emergency Information (24 HOUR)

Non-Emergency Information :

For Resin Products
For Structured Products

PRODUCT IDENTIFICATION

PRODUCT IDENTIFIER:	XENOY 5220U-YW6146 Poly (butylene terephthalate) [CASRN 30965-26-5, alternatives: 24968-12-5 or 26062-94-2]/Poly (bisphenol-A-carbonate) [CASRN 111211-39-3] blend
PRODUCT DESCRIPTION:	Synthetic thermoplastic polymer.
PRODUCT USE:	May be used to produce molded or extruded articles or as a component of other industrial products.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Components listed below are physical or health hazards as defined in the Hazard Communication Standard. The quantities represent typical or average values for the materials shown. Additional compositional data are provided in Section 15, REGULATORY INFORMATION, subject to supplier notification requirements.

Component Name	%	CAS Number	OSHA PEL	ACGIH TWA	GE Recommended Exp. Limits
TITANIUM OXIDE (TI O2)	0.1 - 1	13463-67-7	15 mg/m3 TWA (total dust)	10 mg/m3 TWA	Not established

TETRAHYDROFURAN	0.1 - 1	109-99-9	200 ppm TWA; 590 mg/m3 TWA	50 ppm TWA	50 ppm TWA

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- Pellets with slight or no odor.
- Spilled material may 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. Severe over-exposure may result in nausea, headache, chills, and fever.
- Secondary operations, such as grinding, sanding, or sawing can produce dust which may present an explosion or respiratory hazard.

HMIS Ratings: Health = 0; Flammability = 1; Reactivity = 0; PPE = B

POTENTIAL HEALTH EFFECTS

INGESTION:	No hazard in normal industrial use.
SKIN ABSORPTION:	No absorption hazard in normal industrial use.
INHALATION:	Pellet inhalation unlikely due to physical form. Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). NTP has listed tetrahydrofuran as a carcinogen. Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection.
EYE CONTACT:	Can cause mechanical irritation if dusts are generated.
SKIN CONTACT:	Unlikely to cause irritation even on repeated contact.

CHRONIC / CARCINOGENICITY

NTP:	Tetrahydrofuran: In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm.
OSHA:	Not Regulated.
IARC:	Not Listed.

NOTE: OSHA, IARC and/or NTP have listed carbon, titanium dioxide, crystalline silica (quartz) and certain heavy metals, present in some colorants and fillers, as carcinogens. If these materials are present in this product at significant quantities, they are shown in SECTION 2. These materials are essentially bound to the plastic matrix and are unlikely to contribute to workplace exposure under recommended processing conditions.

Processing fumes may cause irritation to the eyes, skin, and respiratory tract. In cases of severe exposure, nausea and headache can also occur.

Grease-like processing fume condensates on ventilation ductwork, 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 vapors.

SECTION 4: FIRST AID MEASURES

EYES:	Immediately flush eyes with plenty of water. Get medical attention if irritation develops or persists. After initial flushing, remove any contact lenses.
SKIN:	Wash with soap and water. Get medical attention if irritation develops or persists. For hot product, immediately immerse in or flush affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention.
INGESTION:	No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop.
INHALATION:	No specific treatment is necessary since this material is not likely to be hazardous by inhalation.
PROCESSING FUMES:	Processing fumes inhalation may be irritating to the respiratory tract. If symptoms are experienced remove victim from the source of contamination or move victim to fresh air and obtain medical advice.

SECTION 5: FIRE FIGHTING MEASURES

FIRE FIGHTING:	Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products.
EXTINGUISHING MEDIA:	Water spray and foam. Carbon dioxide and dry chemical are not recommended because their lack of cooling capacity may permit re-ignition.
CONDITIONS OF FLAMMABILITY:	Dust accumulation from this product may present an explosion hazard in the presence of an ignition source.
AUTOIGNITION TEMPERATURE:	630 C (1166 F), estimated 360C (680F), estimated
EXPLOSION DATA:	Material not sensitive to mechanical impact but is sensitive to static discharge under dust cloud conditions.

HAZARDOUS COMBUSTION PRODUCTS:	Intense heat, smoke, carbon dioxide, carbon monoxide, hydrocarbon fragments

SECTION 6: ACCIDENTAL RELEASE MEASURES

GENERAL:	Gather and store in a closed container pending a waste disposal evaluation. Allow molten material to solidify before disposal.

SECTION 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 cool dry place. Avoid excessive heat and ignition sources.

SECTION 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, ductwork, and other surfaces using appropriate personal protection. Local ventilation requirements must be determined to limit exposure to processing fumes in the workplace.

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 or powder, avoid prolonged or repeated contact with skin. Wear long pants, long sleeves, well insulated gloves, and a face shield during melt processing. Appropriate clothing - including chemical resistant gloves - should be worn to prevent contact with processing fumes condensate.
RESPIRATORY:	Processing fumes and condensates may contain trace quantities of tetrahydrofuran (typically less than 1 ppm, see section 2, 3 and 11). When using this product at elevated temperatures, implement engineering systems, administrative controls, or a respiratory protection program (including a respirator approved for protection from organic vapors, acid gases, and particulate matter) if processing fumes are not adequately controlled or operators experience symptoms of overexposure. If dust or powder are produced from secondary operations such as sawing, sanding or grinding, use a respirator approved for protection from dust.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
COLOR:	Plastic pellet with slight odor.
ODOR:	Mild
MELTING POINT:	This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
VAPOR PRESSURE (mmHg):	Negligible.
SPECIFIC GRAVITY (WATER = 1):	>1
WATER SOLUBILITY:	Insoluble
% VOLATILES:	Negligible
EVAPORATION RATE:	Negligible.
OCTANOL/WATER PARTITION COEFFCIENT:	Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable
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. 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 Section 8 for respiratory protection advice.)
HAZARDOUS DECOMPOSITION PRODUCTS	Processing fumes evolved at recommended processing conditions may include trace levels of the following materials: tetrahydrofuran (THF) and aliphatic aldehydes

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE HEALTH HAZARDS

ACUTE ORAL:	Rat >5 g/kg Oral toxicity is estimated from tests on similar materials.
EYE CONTACT:	Product not considered primary eye irritant. When similar products, in finely divided form, were placed into the eyes of rabbits, slight transient redness or discharge occurred. This is consistent with the expected slightly abrasive nature of the resin particles.
SKIN CONTACT:	Product not considered primary skin irritant. Draize Skin Primary Irritation Score (rabbit) for similar products, in finely divided form, for a 24-hour exposure is 0. Not expected to be a skin sensitizer based on results of Modified Buehler Guinea Pig Sensitization Test from similar products.Dermal LD50 (rabbit) > 2g/kg, estimated.

SUBCHRONIC HEALTH HAZARDS

SUBCHRONIC TOXICITY:	No data available.

CHRONIC HEALTH HAZARDS
CARCINOGENIC PROPERTIES

NTP:	Tetrahydrofuran: In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm.
OSHA:	Not Regulated.
IARC:	Not Listed.
SPECIAL STUDIES:	PROCESSING FUMES: Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection. In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to tetrahydrofuran at concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm. Titanium Dioxide: The International Agency for Research on Cancer (IARC) has determined titanium dioxide to be a possible human carcinogen (class 2B) based on evidence in experimental animals. Rats exposed to high doses of titanium dioxide by inhalation or intratracheal installation showed an increased incidence of lung tumors.

SECTION 12: ECOLOGICAL INFORMATION

GENERAL:	This material is not expected to be harmful to the ecology.

SECTION 13: DISPOSAL INFORMATION

WASTE DISPOSAL:	Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.
POSSIBLE EPA WASTE CODES:	No data.

SECTION 14: TRANSPORTATION INFORMATION

REGULATORY STATUS:	Not Regulated.

SECTION 15: REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA):	This product is in compliance with all rules and orders of TSCA.
WHMIS PRODUCT CLASSIFICATION:	Not a controlled product.

If any components in this product are SARA 313 listed as reportable, they are shown below. The quantities listed for elements represent typical or average values for compounds containing the element.

Component	CAS Number	%
No SARA 313-listed chemicals in this product.		

If any components in this product are known to the State of California to cause cancer and/or are reproductive hazards, they are listed below:

Component	Reason Listed	CAS Number	%
Carbon black	carcinogen, initial date 2/21/03 (airborne, unbound particles of respirable size)	1333-86-4	0.001- 0.01
4-Vinylcyclohexene	carcinogen, initial date 5/1/96	100-40-3	0.001- 0.01

SECTION 16: OTHER INFORMATION

Prepared by: Product Stewardship

DISCLAIMER: This Material Safety Data Sheet [MSDS] information is provided based on the Hazard Communication Regulations for your region or country and for the use of the persons required to receive this information under those regulations. The information is neither designed nor recommended for any other use or for use by any other person, including for compliance with other laws. GE does not warrant the suitability for use of this MSDS for any other material or product not specifically identified herein. GE does not warrant the accuracy or authenticity of this MSDS unless it has been obtained directly from GE, or posted or viewed on a GE website. Modification of this MSDS, unless specifically authorized by GE, is strictly prohibited. This MSDS is based on information, that is believed to be reliable, but may be subject to change as new information becomes available. Because it is not possible to anticipate all conditions of use, additional safety precautions may be required. Since the use of this material is not under General Electric Company's control, each user is responsible for making its own determination as to the safe and proper handling of this material in its own particular use of this material. GENERAL ELECTRIC COMPANY MAKES NO REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Each user should read and understand this information and incorporate it into individual site safety programs as required by applicable hazard communication standards and regulations.

ABBREVIATIONS:	ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstracts Service CFR: Code of Federal Regulations CPR: Cardiopulmonary Resuscitation EPA: Environmental Protection Agency HMIS: Hazardous Material Identification System (National Paint and Coatings Association) IARC: International Agency for Research on Cancer OSHA: Occupational Health and Safety Administration (U.S.) NTP: National Toxicology Program PEL: Permissible Exposure Limit PPE: Personal Protective Equipment SARA 313: Superfund Amendments and Reauthorization Act, Section 313 TLV: Threshold Limit Value TSCA: Toxic Substance Control Act WHMIS: Workplace Hazardous Materials Information System (Canada)