

MATERIAL DATA SAFETY SHEET

I. IDENTIFICATION

PRODUCT GROUP: POST CONSUMER HDPE

Recycled Thermoplastic Polyethylene from Milk, Water, Juice and Other Un-pigmented Household Containers

BASE RESIN: Ethylene, Homo-polymer

CAS NO: 09002-88-4

II. PHYSICAL DATA

MELT INDEX: 0.55 – 0.85 g/10min

DENSITY: -.958 – 0.965 g/cc

PERCENT VOLATILES BY VOLUME: Nil

APPEARANCE AND ODOR: 1/8 inch diameter pellets, whitish color; negligible odor.

III. INGREDIENTS

HAZARDOUS COMPONENTS:

Recycled polyethylene, none expected.

All post-consumer recycled polymers contain trace residues of fragrances and surfactants.

(See Section X for Additional Information)

IV. FIRE AND EXPLOSION HAZARD DATA

AUTOIGNITION TEMPERATURE:

Generally 500 - 770° F depending on individual product composition

EXTINGUISHING MEDIA:

Apply alcohol-type or all purpose-type foams by manufacturer's recommended techniques for large fire. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES:

Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire. Use self-contained breathing apparatus and protective Clothing.

SPECIAL FIRE AND EXPLOSION HAZARDS:

Avoid dispersion of dust in air to reduce potential for dust ignition/explosions (see Section IX.).

V. HEALTH HAZARD DATA

EXPOSURE LIMITS:

There are no established exposure limits for polyethylene; however, Gem Industries Inc. treats polyethylene dust as a nuisance particulate.

Particulates Not Otherwise Classified (PNOC)

(Nuisance Particulates)

15 mg/m³ TWA Total Dust, OSHA

5 mg/m³ TWA Respirable Fraction, OSHA

10 mg/m³ TWA Inhalable Particulate, ACGIH

3 mg/m³ TWA Respirable Particulate, ACGIH

HEALTH HAZARDS:

Treat fines and dust as nuisance particulates. Avoid breathing dust and processing fumes. Dust causes eye irritation, experienced as stinging and discomfort or pain.

Polyolefin pellets or granules are abrasive and may cause mechanical skin irritation.

Molten or hot polymer will cause thermal burns. All post-consumer recycled polymers contain trace residues of fragrances and detergents/surfactants. These impurities may cause eye, skin and respiratory tract irritation.

EMERGENCY AND FIRST AID PROCEDURES:

If inhaled, remove to fresh air. In case of dust contact with eye(s), flush eyes thoroughly with water for several minutes. Remove contact lenses, if worn. Seek medical advice if irritation persists. For thermal skin burns, remove clothing, any jewelry, and gross debris from the burned area. Leave blisters intact. Wash the area thoroughly with room temperature tap water. Do not use ice. Cover the wounded area with gauze dressing moistened with cool water; keep the dressing moist. Seek medical attention. For thermal eye burns, immediately flush eyes with water and continue washing for several minutes. **DO NOT** remove contact lenses, if worn. Obtain medical attention without delay, preferably from an ophthalmologist. (See Section X for additional information)

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:

Prolonged exposure to temperatures over 250° C may cause resin decomposition.

INCOMPATIBILITY (MATERIALS TO AVOID): None

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Thermal decomposition products may include carbon monoxide, carbon dioxide, aldehydes and other organic vapor. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Aldehydes are known irritants. In addition, some aldehydes are skin sensitizers and/or probably carcinogens.

Acute overexposure to the decomposition products may result in headache, nausea, and irritation of the eyes, skin and respiratory tract. Local exhaust ventilation is recommended for control of airborne dust, fumes and vapor.

REACTIVE OR EXPLOSIVE POLYMERIZATION: Will not occur

VII. SPILLS OR LEAKS

CLEANUP PROCEDURES:

Sweep up and collect in suitable container for disposal. To prevent littering, avoid releases to surface waters.

CAUTION:

Polyethylene pellets on floors are slippery and can cause falls.

WASTE DISPOSAL METHOD:

When disposed of, this product is not considered a RCRA hazardous waste. Dispose of in accordance with local, state and federal regulations.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Use NIOSH-approved respirator if unable to control airborne dust, fumes, and vapor.

PROTECTIVE CLOTHING:

Wear gloves and suitable eye protection.

VENTILATION:

Local exhaust ventilation is recommended for control of airborne dust, fumes, and vapor, particularly in confined areas.

IX. SPECIAL PRECAUTIONS

STORING AND HANDLING PRECAUTIONS:

CAUTION! PLASTIC BAG OR LINER, IF PRESENT, MAY CAUSE STATIC IGNITION HAZARD EXPOSURE TO DUST AND PROCESSING FUMES MAY CAUSE IRRITATION OF SKIN, EYES, AND RESPIRATORY TRACT.

Do not handle or empty bag or liner in presence of flammable vapor. Avoid breathing dust and process fumes. Use with adequate ventilation.

OTHER PRECAUTIONS:

Physical handling and processing of this product such as through pneumatic conveying and grinding, etc., can generate fines and dust particles that can, under certain conditions, pose an explosion hazard. We recommend that the systems used be: (1) equipped with filters of adequate size, (2) operated and maintained in a manner to

Ensure that no leaks develop and (3) adequately grounded. We further recommend good housekeeping be practiced throughout the facility.

ADDITIONAL INFORMATION:

There may be additional information on this product, which may be obtained by calling your Envision Plastics Sales or Customer Service Contact.

FOR INDUSTRY USE ONLY

X. REGULATORY INFORMATION

The following information concerns selected federal, state, and local regulatory requirements potentially applicable to this product. Not all such requirements are identified. Users of this product are responsible for their own regulatory compliance. The concentrations shown are approximate maximum or ceiling levels (weight %).

FEDERAL:

TOXIC SUBSTANCE CONTROL ACT:

All the known components of this product are on the TSCA Inventory. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA)

TITLE III SECTIONS 311 AND 312

This product does not contain chemicals listed as toxic chemicals in 40 CFR 370.2) at levels which could require reporting or customer notification.

SECTION 313

This product does not contain chemicals listed as toxic chemicals in 4- CFR 372.65 at levels which could require reporting or customer notification under Section 313.

DOT CLASSIFICATION: Not applicable

STATE: MASSACHUSETTS

In addition to Section III, the following components of this product appear on the Massachusetts Substance List and are present at levels which could require identification in the MSDS:

CHEMICAL GAS NUMBER RANGE % Chromium 07440-47-3 0.0001 – 0.0010

The opinions expressed are those of qualified experts within Gem Industries Inc. We believe that the information contained is current as of the date of the Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of Gem Industries Inc., it is the user's obligation to determine the conditions of safe use of the product.