



SAFETY DATA SHEET

A Safety Data Sheet is not legally required for this product under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The following information is provided as a courtesy service to our customers.

SECTION 1: IDENTIFICATION

Product identifier

Trade name: **POLYETHYLENE FOAM PRODUCTS**, modified with Flame Retardant Additives*, including Astro-Foam[®] Roll and Sheet, PolyPlank[®] LAM, PolyPlank[®] MDL and PolyPlank[®] EXT.

*Including flame retardant and colorant additives; adhesive and/or cohesive layers and poly / foil laminations.

Synonym(s): None known

Preparation/Revision date: 6 March 2015

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Protective packaging – Flexible polyethylene foam

Uses advised against: None known

Details of the supplier of the safety data sheet

Manufacturer / Supplier

Company name: Pregis Innovative Packaging, Inc.

Address: 1650 Lake Cook Road, Suite 400

Deerfield, IL 60015

Customer service: 877-692-6163

Emergency telephone number

For product and additional safety information:

George T Allen

e-Mail: gallen@pregis.com

24-Hour Emergency Contact:

Chemtrec: (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not regulated per OSHA Hazard Communication Standard 29 CFR 1910.1200.

POLYETHYLENE FOAM PRODUCTS

Preparation Date: 6 March 2015

This product conforms to the U.S. OSHA Hazard Communication Standard's definition of an "Article," i.e., "...a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Label elements

| | |
|---------------------------------|------|
| Contains: | None |
| Hazard pictogram: | None |
| Signal word: | None |
| Hazard statement: | None |
| Precautionary statements: | |
| - Prevention: | None |
| - Response: | None |
| - Storage: | None |
| - Disposal: | None |
| Supplemental label information: | None |

Other hazards None

Hazard summary

| | |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical hazards: | Not classified for physical hazards. |
| Health hazards: | Not classified for health hazards. |
| Environmental hazards: | Not classified for hazards to the environment. |
| Main symptoms: | Eye contact may cause slight irritation. Sensitive individuals may experience dermatitis from flame retardant additives. Inhalation of processing fumes or dusts may cause upper respiratory irritation. |

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

This product conforms to the U.S. OSHA Hazard Communication Standard’s definition of an “Article,” i.e., “...a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical , and does not pose a physical hazard or health risk to employees.” The following information is provided as a courtesy.

| Chemical Name | Percent | CAS No. | Notes |
|---------------------------------------|----------|------------|-------|
| Polyethylene resin | ≥ 84 | | |
| Ethene/Butene Copolymer | | 25087-34-7 | |
| Tris-nonylphenyl phosphite | | 26523-78-4 | |
| Polyethylene Homopolymer | | 9002-88-4 | |
| Crystalline silica | | 68855-54-9 | |
| Hydrocarbon Foaming Agents | ≤ 5 | | |
| Isobutane | | 75-28-5 | |
| n-butane | | 106-97-8 | |
| Talc (Magnesium silicate) | ≤ 4 | 14807-96-6 | |
| Foam Processing Aid, Monodiglycerides | ≤ 2 | 67701-33-1 | |
| Organic and/or inorganic colorants | ≤ 5 | Various | |
| Antimony Trioxide/Halogenated Organic | ≥ 6 ≤ 18 | Mixture | |

Composition comments: Organic and/or inorganic colorants may include carbon black pigment (which is thoroughly bound to the polymer matrix).

SECTION 4: FIRST AID MEASURES

General Information

Show this Safety Data Sheet to the medical professional in attendance. Adverse health effects are not anticipated with use of this product as intended. If symptoms occur, follow first aid measures as appropriate.

Description of first aid measures

Inhalation: If symptoms are experienced, move victim to fresh air, if symptoms persist, obtain medical attention.

Skin contact: Wash contaminated skin with mild soap and water. Get medical attention if irritation develops or persists.

Eye contact: Rinse immediately with plenty of water, including under the eyelids. Get medical attention if irritation develops or symptoms persist.

Ingestion: If gastric irritation or discomfort persists seek medical advice.

Notes to Physician: None specified

POLYETHYLENE FOAM PRODUCTS

SECTION 4: FIRST AID MEASURES (CONT'D)**Most important symptoms and effects, both acute and delayed**

Eye contact may cause slight irritation. Sensitive individuals may experience dermatitis from flame retardant additives. Inhalation of processing fumes or dusts may cause upper respiratory.

Indication of any immediate medical attention and special treatment needed

None known

SECTION 5: FIRE FIGHTING MEASURES**General fire hazards**

Flammability not established for product as a whole. Polyethylene is combustible. Pregis's polyethylene foam also contains some residual flammable blowing agent, which might accumulate in confined spaces to produce concentrations in the explosive range. Processes such as grinding could produce fine dust and flammable vapors. Both could be potential explosion hazards.

Extinguishing Media

Suitable extinguishing media:

Water, Foam, Dry Chemical, Carbon Dioxide. Use extinguishing media appropriate for surrounding material.

Unsuitable extinguishing media:

None known

Special hazards arising from the substance or mixture

Temperatures above 480°F could cause product degradation potentially producing toxic vapors including carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and/or alcohols.

Advice for firefighters

Special protective equipment for firefighters:

Firefighters should use self-contained breathing apparatus and wear full protective equipment. Personnel / bystanders should be kept upwind of fire.

Special firefighting procedures:

Not applicable

Special remarks on fire hazards:

None

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Protective clothing is not required under normal conditions of intended use, however, the use of gloves and safety glasses is consistent with good manufacturing and hygienic practice.

Methods and materials for containing and cleaning up

No special measures necessary beyond general housekeeping. Pick up and retaining material for recycling or disposal.

SECTION 7: HANDLING AND STORAGE**Precautions for safe handling**

Further processing of polyethylene foam products with any fabrication processes such as slitting, grinding, skiving, sawing, routing, or die cutting that cuts cells can release residual flammable blowing agent. A flammable concentration could accumulate if air is not properly circulated. All sources of ignition should be prevented in areas where foam is fabricated. Humidifiers or ionized air blowers can be used to reduce the possibility of static spark. Grinding equipment and any bins or hoppers should be purged with a positive air flow to dissipate any build-up of blowing agent gases. Monitoring systems should be in place to insure that a concentration of blowing agent does not accumulate during shutdowns or malfunctions. For hot wire cutting or thermal welding air flow should be provided to adequately disperse potential blowing agent build up. Control any vapor or dust emissions that may be generated by further processing of product.

Conditions for safe storage, including any incompatibilities

Always store polyethylene foam products in well-ventilated areas. Always keep foam products away from excessive heat and any sources of ignition such as sparks or flame. Never store foam in confined areas or sealed-off compartments. Foam scrap or fabricated parts for disposal should be stored and shipped in ventilated containers. When opening doors and unloading foam shipments, extinguish all possible sources of ignition such as matches, cigarettes, sparks, and lighters. Allow air circulation into the trailer for ten minutes after opening trailer doors before unloading foam.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION
United States. Occupational Exposure Limits

| Component | CAS No. | Type | Value | Form |
|----------------------------|------------|------------|-------------------------|-----------------|
| Nuisance dust | N/A | ACGIH TWA | 10 mg/m ³ | Total dust |
| Nuisance dust | N/A | ACGIH TWA | 3 mg/ m ³ | Respirable dust |
| Nuisance dust | N/A | OSHA PEL | 15 mg/ m ³ | Total dust |
| Nuisance dust | N/A | OSHA PEL | 5 mg/ m ³ | Respirable dust |
| Crystalline Silica | 68855-54-9 | OSHA TWA | 0.05 mg/ m ³ | - |
| Crystalline Silica | 68855-54-9 | ACGIH TWA | 0.05 mg/ m ³ | - |
| Isobutane | 75-28-5 | NIOSH TWA | 800 ppm | - |
| n-Butane | 106-97-8 | ACGIH TWA | 800 ppm | - |
| n-Butane | 106-97-8 | NIOSH TWA | 800 ppm | - |
| Hydrous magnesium silicate | 14807-96-6 | NIOSH TWA | 2 mg/ m ³ | - |
| Hydrous magnesium silicate | 14807-96-6 | ACGIH TWA | 2 mg/ m ³ | - |
| Hydrous magnesium silicate | 14807-96-6 | OSHA PEL | 20 mppcf | - |
| Hydrous magnesium silicate | 14807-96-6 | NIOSH IDLH | 1000 mg/ m ³ | - |
| Antimony trioxide | 1309-64-4 | ACGIH TWA | 0.5 mg/ m ³ | - |

Appropriate engineering controls

Local ventilation should be provided if product is further processed producing dust or fumes. General ventilation may also be used, but local ventilation is usually preferable.

Individual Protective Measures
General Information:

The following general hygiene considerations are recognized as common, good industrial hygiene practices. Wash hands after use and before eating, avoid breathing dust, and wear safety glasses.

Eye/face protection:

Wear safety glasses. While safety glasses are not required under normal conditions of intended use, wearing safety glasses is consistent with good manufacturing / hygienic practice and recommended if product is further processed.

Skin protection:

Wear protective gloves. While protective gloves are not required under normal conditions of intended use, wearing protective gloves is consistent with good manufacturing / hygienic practice.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT'D)

Respiratory protection: If product is being further processed producing dust or fumes and adequate ventilation should be provided. In case of inadequate ventilation or risk of inhalation of dust or fumes, wear a suitable air purifying respirator with particle filter or dust mask.

Thermal hazards: None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties

| | | | |
|---------------------------------------------------------------|---------------------------------------|------------------------------------------------|--------------------------------|
| Form | Solid plastic foam | Explosive properties | Not applicable |
| Color | Various colors | Explosive limit | Not applicable |
| Odor | Odorless | Vapor pressure | Not applicable |
| Odor threshold | Not applicable | Vapor density | Not applicable |
| pH | Not applicable | Evaporation rate | Not applicable |
| Melting/freezing point | 220°F | Relative density | 0.87-1.05 (polyethylene resin) |
| Boiling point, initial boiling point and boiling range | Not applicable | Partition coefficient (n-octanol/water) | Not applicable |
| Flash point | Not applicable | Solubility (water) | Insoluble in water |
| Auto-ignition temperature | 343°C (polyethylene resin) | Decomposition temperature | > 480°F |
| Flammability (solid, gas) | Will burn but does not ignite readily | Bulk density | Not applicable |
| Flammability limit-lower% | Not applicable | Viscosity | Not applicable |
| Flammability limit-upper% | Not applicable | VOC (weight %) | Not applicable |
| Oxidizing properties | Not applicable | Percent volatile | Not applicable |

SECTION 10: STABILITY AND REACTIVITY

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization will not occur.

Conditions to avoid Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

SECTION 10: STABILITY AND REACTIVITY (CONT'D)**Incompatible materials**

Strong oxidizers

Hazardous decompositions products

Temperatures above 480°F could cause product degradation potentially producing toxic vapors including carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and/or alcohols.

SECTION 11: TOXICOLOGICAL INFORMATION**General information on likely routes of exposure****Ingestion:**

No adverse effects known to be associated with ingestion of small amounts of this inert material. Ingestion of large quantities may result in gastrointestinal discomfort or distress.

Inhalation:

Inhalation of fumes from heated plastic may cause irritation of respiratory tract, chest discomfort, and/or dizziness. Inhalation of dust may cause respiratory irritation. Polyethylene dust from grinding and pulverizing operations is considered nuisance dust.

Skin contact:

Sensitive individuals may experience dermatitis from flame retardant additives. In rare cases, contact with sensitive individuals' skin may result in irritation or reddening of skin.

Eye contact:

May cause slight irritation.

Symptoms:

Eye contact may cause slight irritation. Sensitive individuals may experience dermatitis from flame retardant additives. Inhalation of processing fumes or dusts may cause upper respiratory irritation.

11.1 Information on toxicological effects**Acute Toxicity:**

No data were identified for this product as a whole. Polyethylene resin (main ingredient) not considered to be toxic to humans or animals. Rats inhaling polyethylene dust developed mild inflammatory changes in the lungs. Prolonged inhalation of thermal degradation products from polyethylene caused neurological effects in rats. Animal studies showed no adverse health effects on the digestive system when fed up to 20% polyethylene.

Serious Eye Damage/Irritation:

No data were identified for this product as a whole. At elevated temperatures, such as produced by hot cutting, fumes may cause eye irritation.

SECTION 11: TOXICOLOGICAL INFORMATION (CONT'D)

| | |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin corrosion/Irritation: | No data were identified for this product as a whole. No skin effects are expected from polymer contact. Sensitive individuals may experience dermatitis from flame retardant additives. |
| Respiratory/Skin Sensitization: | No data were identified for this product as a whole. Inhalation at ambient temperatures unlikely except for dust from grinding. At elevated temperatures, such as produced by hot cutting, fumes may cause respiratory irritation. |
| Germ Cell Mutagenicity: | No data were identified for this product. |
| Carcinogenicity: | Crystalline silica (< 0.1%): IARC-classified 1 (Proven for human); NTP-Classified 2 (Reasonably anticipated) target organ is the lung. Antimony trioxide: IARC-Classified 2B (Possibly carcinogenic for humans), target organ is the lung; California Proposition 65-listed carcinogen. Release of these materials may occur in small quantities during processing of the product, but is not expected to present a hazard. |
| Reproductive Toxicity: | No data were identified for this product. |
| Developmental Effects: | No data were identified for this product. |
| STOT – Single Exposure: | No data were identified for this product. |
| STOT – Repeated Exposure: | No data were identified for this product as a whole. Subchronic (50 to 90 day) feeding studies conducted on rats, dogs, and swine showed no effects from dietary levels of 1 to 20% powdered and shredded polyethylene. |
| Aspiration Hazard: | Not relevant based on physical form of the product. |
| Conclusion/Summary | Eye contact may cause slight irritation. Sensitive individuals may experience dermatitis from flame retardant additives. Inhalation of processing fumes or dusts may cause upper respiratory irritation. |

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity | No data were identified for this product as a whole. Polyethylene resin (main ingredient) ecotoxicity is expected to be low. |
| Persistence and degradability | No data were identified for this product. |
| Bioaccumulative potential | No data were identified for this product as a whole. Polyethylene resin (main ingredient) is not expected to bioaccumulate. |

SECTION 12: ECOLOGICAL INFORMATION (CONT'D)

| | |
|-------------------------------------------|--------------------------------------------------------------------|
| Mobility | No data available |
| Results of PBT and vPvB assessment | Not a PBT or vPvB material |
| Other adverse effects | None known |
| Conclusion/Summary | The material should pose no significant hazard to the environment. |

SECTION 13: DISPOSAL CONSIDERATIONS**Waste treatment methods**

| | |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Residual waste: | Dispose as normal, non-hazardous, solid waste, in accordance with applicable Federal, State and Local regulations. |
| Contaminated packaging: | Dispose as normal, non-hazardous, solid waste, in accordance with applicable Federal, State and Local regulations. |
| Disposal methods/information: | This material is NOT classified as a Hazardous Material by RCRA. |

SECTION 14: TRANSPORT INFORMATION

| | |
|-------------------------------------|-----------------------------------------------------------|
| UN Number | Not applicable, not regulated as hazardous for transport. |
| UN proper shipping name | Not applicable, not regulated as hazardous for transport. |
| Transport hazard class(es) | Not applicable, not regulated as hazardous for transport. |
| Packing group | Not applicable, not regulated as hazardous for transport. |
| Environmental hazards | Not applicable, not regulated as hazardous for transport. |
| Special precautions for user | Not applicable, not regulated as hazardous for transport. |

SECTION 14: TRANSPORT INFORMATION (CONT'D)

**Transport in bulk according to
Annex II MARPOL73/78 and the IBC**

Code Not applicable, not regulated as hazardous for transport.

The transport regulation may vary based on the country of use. Check for the appropriate regulations in the country of transport or usage of this product.

SECTION 15: REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****USA Federal Regulations**

| | |
|-------------------------------------------------------|-------------------------------------------------------------------|
| 29 CFR 1910.1200 Hazard Communication Standard (HCS): | Not regulated |
| TSCA (TSCA 12b): | Nonylphenol (a trivial component of polyethylene) |
| CERCLA 102A / 103: | None |
| SARA III, Sec. 302: | None |
| SARA III, Sec. 311 / 312: | Crystalline silica (68855-54-9), antimony trioxide (1309-64-4) |
| SARA III, Sec. 313 | Antimony trioxide (Antimony compounds) |
| CALIFORNIA PROPOSITION 65: | Warning label required. |

Other Regulations

All shipping mailer packaging and packaging components, manufactured in the United States by Pregis Innovative Packaging, Inc., comply with the several United States' enacted provisions of the Coalition of Northeast Governors ("CONEG") legislative model for the reduction of toxics in packaging and the California Toxics in Packaging Prevention Act. Pregis Innovative Packaging, Inc.'s manufacturing practices prohibit the intentional introduction of cadmium(Cd), hexavalent chromium(Cr +6), lead (Pb), or mercury (Hg) into its products' formulations. Further, the cumulative total of all such metals' incidental concentrations does not exceed 100 parts per million (ppm).

SECTION 16: OTHER INFORMATION**List of abbreviations**

| | |
|--------|-----------------------------------------------------------------------------------------------------|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| IARC | International Agency for Research on Cancer |
| IBC | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| NTP | National Toxicology Program |
| OSHA | Occupational Safety and Health Administration (United States) |
| PEL | Permissible Exposure Limit |
| PBT | Persistent, Bioaccumulative and Toxic |
| RCRA | Resource Conservation and Recovery Act |
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety Data Sheet |
| TSCA | Toxic Substances Control Act |
| TWA | Time Weighted Average |
| vPvB | Very Persistent and Very Bioaccumulative |

SDS Revisions

SDS prepared on 6 March 2015

Disclaimer

Information provided by sources external to our company and set forth herein is offered in good faith as accurate, but without guarantee. Safety precautions contained herein cannot anticipate all individual and unique situations. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are, therefore, assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing herein is intended as recommendation for uses which infringe valid patents or as extension of license under valid patents. Appropriate warnings and safe handling procedures should be provided to users.