

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 and Antistatic Additives (FRAS)*, Including Astro-Foam[®] Roll and Sheet, PolyPlank[®] LAM, PolyPlank[®] MDL and PolyPlank[®] EXT..

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

Synonym(s): None known

Preparation/Revision date: 6 July 2017

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:

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.

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)

POLYETHYLENE FOAM PRODUCTS

Preparation Date: 6 July 2017

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 anti-static or flame retardant additives. Inhalation of processing fumes or dusts may cause upper respiratory irritation.

SAFETY DATA SHEET

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	
Polyethylene Homopolymer		9002-88-4	
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	≥ 10 ≤ 18	Mixture	
Anit-Static Additives	≤ 1		
Ethoxylated amide <i>or</i>		Proprietary	
Cocodiethanol amide		Proprietary	

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.

SECTION 4: FIRST AID MEASURES (CONT'D)

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

Most important symptoms and effects, both acute and delayed Eye contact may cause slight irritation. Sensitive individuals may experience dermatitis from anti-static or 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.

Special firefighting procedures: Not applicable

Special remarks on fire hazards: None

POLYETHYLENE FOAM PRODUCTS

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
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)

SAFETY DATA SHEET

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)

SAFETY DATA SHEET

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 anti-static or 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 anti-static or 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:	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 anti-static or 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:	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 July 2017

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.