

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: Astro-Foil® and Astro-E®, including MPET (Low-E) Products

Synonym(s): None known

Preparation/Revision date: 20 August 2019

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

Identified uses: Protective packaging

Uses advised against: None known

Details of the supplier of the safety data sheetManufacturer / 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
Director of Material Sciences and Technical Services
Telephone: (559) 651-0951 x 101
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.

SECTION 2: HAZARDS IDENTIFICATION (CONT'D)

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. Inhalation of fumes from heated plastic may cause irritation of respiratory tract, chest discomfort, and/or dizziness. In rare cases, skin contact in sensitive individuals may cause irritation or reddening of skin.

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."

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 respiratory irritation occurs, remove affected personnel to fresh air. Obtain medical attention if irritation persists or is severe.

Skin contact:

Wash contaminated skin with mild soap and water. Individuals experiencing skin sensitivity should obtain medical advice.

Eye contact:

Flush eye with water for 15 minutes. Get medical attention if irritation persists.

Ingestion:

Not considered a likely route of entry. Swallowing small quantities will not cause harm.

Notes to Physician:

None specified

Most important symptoms and effects, both acute and delayed

Inhalation of fumes from heated plastic may cause irritation of respiratory tract, chest discomfort, and/or dizziness. In rare cases, contact with sensitive individuals' skin may result in irritation or reddening of skin.

Indication of any immediate medical attention and special treatment needed

None known

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

Polyethylene is combustible. Processes such as grinding could produce fine dust and could be a potential explosion hazard. Can burn in fire, releasing toxic vapors, gases and fumes.

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

None known

SECTION 5: FIRE FIGHTING MEASURES (CONT'D)**Advice for firefighters**

Special protective equipment for firefighters: Wear full bunker gear including a positive pressure self-contained breathing apparatus.

Special firefighting procedures: Not applicable.

Special remarks on fire hazards: Polyethylene is combustible. Processes such as grinding could produce fine dust that could be a potential explosion hazard.

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

Protective clothing is not normally 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.

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

Precautions for Handling: Suffocation hazard exists if material covers face. Keep away from children.

Conditions for safe storage, including any incompatibilities

Avoid contact with strong oxidizers and excessive heat.

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

Not established for product as a whole.

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.

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

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:	Not normally required, but may be recommended if product is further processed.
Skin protection:	Not normally required. Wearing gloves is consistent with good industrial safety / hygiene practice.
Respiratory protection:	Not normally required. If product is being further processed producing dust or fumes, local ventilation should be provided. Respiratory protection is normally only to be used as a temporary measure until proper ventilation can be installed.
Thermal hazards:	None known.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Solid, plastic, reflective insulation	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	219-239 °F (for polyethylene resin)	Relative density	0.91-0.97 for polyethylene resin (main component)
Boiling point, initial boiling point and boiling range	Not applicable	Partition coefficient (n-octanol/water)	Not applicable
Flash point	Not applicable	Solubility (water)	Insoluble
Auto-ignition temperature	No established for product as a whole	Decomposition temperature	No data available
Flammability (solid, gas)	No data available	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 and excessive heat.
Incompatible materials	Strong oxidizing agents.
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:	Not expected to occur under normal conditions of intended use. No adverse effects known to be associated with ingestion of small amounts of this inert polymer material. Ingestion of large quantities may result in gastrointestinal discomfort or distress.
Inhalation:	Inhalation at ambient temperatures unlikely except for dust from grinding. Fumes from overheating or combustion of polymer may cause respiratory irritation. Inhalation of dust may cause respiratory irritation.
Skin contact:	In rare cases, skin contact in sensitive individuals may cause irritation or reddening of skin.
Eye contact:	Eye contact may cause slight irritation.
Symptoms:	Eye contact may cause slight irritation. Inhalation of fumes from heated plastic may cause irritation of respiratory tract, chest discomfort, and/or dizziness. In rare cases, skin contact in sensitive individuals may cause irritation or reddening of skin.

SECTION 11: TOXICOLOGICAL INFORMATION (CONT'D)**11.1 Information on toxicological effects**

Acute Toxicity:	Not established for product as a whole. Polyethylene resin (main ingredient) not considered to be toxic to humans or animals.
Serious Eye Damage/Irritation:	No data were identified for this product.
Skin corrosion/Irritation:	Skin contact not normally a problem. In rare cases, skin contact in sensitive individuals may cause irritation or reddening of skin.
Respiratory/Skin Sensitization:	No data were identified for this product.
Germ Cell Mutagenicity:	No data were identified for this product.
Carcinogenicity:	Polymer matrix may integrate crystalline silica, a substance "known to the State of California to cause cancer," though crystalline silica concentrations, if any, are small (< 1% by weight) and not readily released from their chemical bonds to polymer matrix. Metallized film may contain several substances "known to the State of California to cause cancer" in trace quantities.
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.
Aspiration Hazard:	Not relevant based on physical form of the product.

Conclusion/Summary

This product is not expected to produce toxic effects.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	No data were identified for this product as a whole. For polyethylene resin (main ingredient) ecotoxicity is expected to be low.
Persistence and degradability	No data available
Bioaccumulative potential	No data were identified for this product as a whole. For polyethylene resin (main ingredient), bioaccumulation is not expected to occur.
Mobility	No data available
Results of PBT and vPvB assessment	No data available
Other adverse effects	None known
Conclusion/Summary	This product is not classified as hazardous 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:	If the material as supplied becomes a waste, it does not meet the definition of a hazardous waste as defined under RCRA (40 CFR 261).

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.
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

California Proposition 65:

This product contains chemicals known to the State of California to cause cancer and reproductive harm.

TSCA 12b:

Nonylphenol (a trivial compound of polyethylene)

SARA Title III – Section 302,

Extremely Hazardous Substances (EHS):

None

CERCLA 102A/103 - Hazardous substances:

None

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)

SECTION 16: OTHER INFORMATION (CONT'D)

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 20 August 2019.

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.