



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME(S): **AstroShield** (All Constructions)

SUPPLIER: Atro Reflective Insulation AS

CONTACTS: Contact your Astro Reflective Insulation products sales (+47 91570803)

2. COMPOSITION / HAZARDOUS INGREDIENTS INFORMATION

OSHA REGULATORY STATUS: This material is not classified as hazardous under OSHA regulations. However, this MSDS contains valuable information essential to the safe handling and use of the product. This MSDS should be retained and available for employees and other users of this product.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Odorless plastic in a variety of colors and constructions. Can burn in fire, releasing toxic vapors, gases, and fumes.

POTENTIAL HEALTH EFFECTS

EYE: May cause slight irritation.

SKIN: No hazard in normal industrial use.

INGESTION: Ingestion unlikely, material physiologically inert.

INHALATION: Inhalation at ambient temperatures unlikely except for dust from grinding, slitting, die cutting, etc. At elevated temperatures, fumes may cause irritation.

EFFECTS OF OVEREXPOSURE: 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.

CARCINOGENICITY LISTINGS: NTP: No IARC: No

POTENTIAL ENVIRONMENTAL EFFECTS: The material should pose no significant hazard to the environment. See Section 12, "Ecological Information."

4. FIRST AID MEASURES

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

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

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

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

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5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES: Not established for product as a whole
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water, foam
FIRE & EXPLOSION HAZARDS: Polyethylene is combustible. Processes such as grinding could produce fine dust and could be a potential explosion hazard.
FIREFIGHTING EQUIPMENT: Wear full bunker gear including a positive pressure self-contained breathing apparatus.
HAZARDOUS
DECOMPOSITION PRODUCTS: Temperatures above 480°F could cause product degradation potentially producing toxic vapors.

6. ACCIDENTAL RELEASE MEASURES

No special measures are necessary beyond good general housekeeping.

7. HANDLING AND STORAGE

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION: 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.
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.
EYE PROTECTION: Not normally required, but is recommended if product is further processed.
SKIN PROTECTION: Not normally required. Wearing gloves is consistent with good industrial safety / hygiene practice.
GENERAL HYGIENE: There are no known health hazards associated with this material when used as recommended.
CONSIDERATIONS: 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.

EXPOSURE GUIDELINES: Not established for product as a whole.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Plastic reflective insulation in a variety of colors and constructions
ODOR: None
PHYSICAL STATE: Solid
pH: Not applicable
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
BOILING POINT: Not applicable
MELTING POINT: PE = 219-239°F
WATER SOLUBILITY: Insoluble
SPECIFIC GRAVITY: For polyethylene resin (major component) 0.91-0.97
AUTO-IGNITION: Not established for product as a whole.
TEMPERATURE:

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10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable
CONDITIONS TO AVOID: Extreme heat
INCOMPATIBILITY: Strong oxidizing agents
HAZARDOUS DECOMPOSITION 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.
HAZARDOUS POLYMERIZATION: Will not occur

11. TOXICOLOGICAL INFORMATION

TOXICITY: Not established for product as a whole. Polyethylene resin (main ingredient) not considered to be toxic to humans or animals.
IRRITATION: Skin contact not normally a problem. Inhalation at ambient temperatures unlikely except for dust from grinding. At elevated temperatures, such as produced by hot cutting, fumes may cause respiratory or eye irritation.
CARCINOGENIC COMPONENTS: 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.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS: Not established for product as a whole. For polyethylene resin (main ingredient) ecotoxicity is expected to be low and bioaccumulation is not expected to occur.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: If the material as supplied becomes a waste, dispose of in accordance with local, state, and federal laws and regulations. Contact your local or state environmental agency for specific rules.
RCRA 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).

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: Not regulated
INTERNATIONAL SEA TRANSPORT / I.M.O.; I.M.D.G.: Not regulated
INTERNATIONAL AIR TRANSPORT / I.A.T.A.; I.C.A.O.: Not regulated
EUROPEAN ROAD & RAIL / A.D.R.; R.I.D. Not regulated
CANADIAN TRANSPORT OF DANGEROUS GOODS: Not regulated

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15. REGULATORY INFORMATION

CERCLA 102A / 103:	None
TSCA 12(b):	Nonylphenol (a trivial component of polyethylene)
SARA III, Sec. 302	None
CALIFORNIA PROPOSITION 65:	This product contains chemicals known to the State of California to cause cancer and reproductive harm
COALITION OF NORTHEAST GOVERNORS ("CONEG") legislative model for the reduction of toxics in packaging and CALIFORNIA TOXICS IN PACKAGING PREVENTION ACT	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).

16. OTHER INFORMATION

None.

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.

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