

## MATERIAL SAFETY DATA SHEET

### General

Name	Heatsheets® reflective-insulating event, rescue/emergency blankets, bivvys, and related products
Chemical Name	Polyethylene/vapor-coated with 99.999% pure aluminum (product by volume: 99.67% polyethylene, < 0.00338% aluminum)
Synonyms	Metallized Blankets, Metallized PE, Metallized polyethylene, MetPE, "mylar" (a carryover from earlier products made from DuPont Mylar®, incorrectly applied to this product), "space blankets", Heatsheets®
Trade Name	Heatsheets®, Heatsheets®-on-a-Roll™
Chemical Family	Ethylene-based polymer films (polyolefins)
Formula	Metallizing-grade polyethylene film, vapor-coated on one-side with a 99.999% pure reflective-insulating, vapor deposited aluminum (< 0.00338%, or just over 3/1000 of a one percent of the total material, by volume)

**Hazardous Components:** This product is not hazardous as defined in 29 CFR1910.1200

### Physical Data

Boiling Point	Not applicable
Specific Gravity	Not applicable
Vapor Pressure	Not applicable
Volatile	Not applicable
Vapor Density	Not applicable
Evaporation Rate	Not applicable
Solubility	Insoluble
Appearance	Bright silver one side, slightly hazy silver through the film side, if no colorant has been added

### Fire and Explosion

Flashpoint and Auto-ignition Temperature	Estimated minimum, > 645 °F — Data obtained from ExxonMobile Chemical Company Material Safety Data Sheet for LDPE Homopolymer (all Grades) MSDS No. 87000000 dated 02/22/05
Flammable Limits	Not applicable
General Hazard:	Solid material, may burn at or above the flashpoint. If thermally decomposed, flammable/toxic gases may be released. Toxic gases will form upon combustion.  CAUTION: Aluminum surface is electrically conductive. Metallized plastics are capable of storing and discharging electrical energy under specific conditions, which may lead to an incendiary event in the presence of flammable vapors, gases or fuels, or other volatiles, particularly under low-humidity conditions. Use of grounding measures is recommended.

Contact us for technical information and support at:

755 Baywood Drive, Petaluma CA 94954-5508; Tel: 1-707-658-4655; email: [info@afminc.com](mailto:info@afminc.com); website: [www.afminc.com](http://www.afminc.com)

Heatsheets® is a trademark of AFM Inc. Mylar® is a trademark of E.I. DuPont;

**Procedures for Spills or Leaks:** Not applicable.

**Recommend disposal:** Recycle with similar low-density polyethylene (LDPE, #4) products or dispose of in sanitary landfill in accordance with local, state, and federal regulations.

**R-T-K Composition:** This product does not contain any state right-to-know chemicals.

### Reactivity Data

Stability	LDPE is a stable material.  Aluminum coating may degrade if exposed to corrosive substances or to highly acidic or base solutions, including some forms of atmospheric rain. Coating loss may occur through oxidation, but no known hazardous conditions will result.
Hazardous Decomposition Products	Fumes produced when LDPE is heated to decomposition may include carbon monoxide and carbon dioxide. Aluminum coating represents < 0.007% by volume and its effect is negligible.
Hazardous Polymerization:	None

### Health Hazard Data

Effects of Overexposure Ingestion: Inhalation: Skin absorption: Skin contact: Eye contact:	Non-toxic Non-toxic Non-irritating Expected to be non-irritating Expected to be non-irritating
Chronic Effects of Overexposure	Expected to be non-irritating
Emergency and First Aid Procedures Eye contact: Skin contact: Ingestion:	In case of eye contact with edges and corners of thin plastic film, seek medical attention. Molten material will cause thermal burns. If appreciable quantities are swallowed, seek medical attention.
Electrical Shock Hazard/Electrostatic Discharge (ESD)	This product's reflective coating is electrically conductive. The dielectric film combined with the electrically conductive coating presents a potential risk of electrostatic discharge and will also conduct electrical energy. Avoid contact with any electrical source, particularly downed power-lines, electrical outlets, motors, or other potential electrical sources. Avoid potentially explosive environments, including broken gas mains, dust or particulate with explosive potential, or sensitive electronic devices vulnerable to ESD hazards.

### Special Protection Information\*

Respiratory Protection	Not applicable.
Ventilation	Not applicable.
Protective Gloves	Non-conductive gloves recommended when separating this material in sheet form to avoid mild ESD shock (high voltage, micro-amperage)
Eye Protection	Not applicable

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Explosive Environments or Electrical Power Sources	Avoid contact with any electrical source, particularly downed power-lines, electrical outlets, motors, or other potential electrical sources. Avoid potentially explosive environments, including broken gas mains, dust or particulate with explosive potential, or sensitive electronic devices vulnerable to ESD hazards. Passive or active ESD suppression measures, including grounding rods or brushes may be employed effectively to minimize or eliminate ESD potential.
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\*Except in thermo-processing. These hazards do not exist in the finished product.

### **Special Precautions**

Store in protective packaging to preserve thermal (IR) reflective aluminum coating. Avoid contact with oxidizing materials (heat, water, or corrosives) to prevent degradation of coating.

CAUTION: Exposed aluminum layer is electrically conductive. Avoid contact with electrical outlets, electric motors, appliances, transformers, fallen power lines, or other electrical sources to avoid electric shock.

Avoid use during electrical storms. While no lightning strikes have been reported, we strongly recommend not risking the possibility of exposing the reflective aluminum layer to potential lightning strikes.

Avoid exposure of conductive layer to explosive vapors such as solvents or fuels where static discharge might lead to ignition or explosion; or to electro-static discharge (ESD) sensitive electronic devices such as cellular phones, computers, or other electronic equipment where ESD might damage sensitive electronic components.

ESD risks may be eliminated by proper grounding of the conductive layer to dissipate stored electrical potential.

Do not leave children unattended when using this product to avoid possible suffocation or inadvertent shock hazard.

### **Sara Title III Section 311, 312, and 313 Information**

No reportable chemicals under either the toxic release or reportable hazard programs for the film or aluminum coating.

Ammonium Hydroxide, Acetylenic Diol, Diethylene Glycol Monomethyl Ether, Propylene Glycol, Tetramethyl-5-Decyne-4, 7-diol, n2,4,7,9; and Isopropanol 99% Alcohol are a part of the water-based ink system used to print Heatsheets, and trace amounts may remain on surface printed inks but are considered insignificant.

No chemicals subject to the reporting requirements of Toxics Release Regulatory Reporting (or Form R) are present.

Skin absorption health risks and symptoms of exposure (possible skin irritation) are theoretically possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.

### **California Proposition 65 Information**

This product does not contain any California Proposition 65-designated chemicals.

### **Consumer Product Safety Improvement Act of 2008 (CPSIA) Information**

This product complies with the requirements of H.R. 4040 Section 101 "Children's products containing lead; lead paint rule" and Section 108 "Prohibition on Sale of Certain Products Containing Specified Phthalates" of the 2008 Consumer Product Safety Improvement Act (CPSIA 2008).

Lead Content	Less than 1 ppm (part per million). Requirement is less than 300 ppm (.03%)
Phthalates Content	Less than .01% ppm (part per million). Requirement is less than 1000 ppm (.1%)

### **Regulatory Information**

OSHA Hazard Communication Standard. Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined to be non-hazardous.

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Advanced Flexible Materials

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