

Reflect-A-Cool™

Adhesive Backed Reflective Material

Engineering's Reflect-A-Cool is a reflective material with an adhesive back and offers outstanding protection. In combination of fiberglass and an aluminized layer of reflective foil, Reflect-A-Cool is pliable and easily installed where heat protection is necessary. Reflect-A-Cool will reflect up to *1000 degrees F. and will protect against a maximum surface temperature of *400 degrees F.

Reflect-A-Cool has excellent adhesive qualities and is ideal for firewalls, marine engine bays or in the tub of a boat where typical mechanical fasteners cannot be used for installation.

Reflect-A-Cool comes in 48"x 36" sections or it can be ordered in multiple yards-48" wide.

**The amount of reflection, as with any reflective material, depends upon the distance from the object and the mass of the heat to be reflected.*

PRODUCT SPECIFICATIONS

FACING COMPOSITIONS	DESCRIPTION	VALUES (ENGLISH)	VALUES (METRIC)
Foil	Aluminum	0.001 inch	25.4 microns
Adhesive	Polymeric		
Fabric	Glass cloth	2.8 oz / yd ²	94.9 gm / m ²

PHYSICAL PROPERTIES	TEST METHOD	VALUES (ENGLISH)	VALUES (METRIC)
Basis Weight	Scale	38.0 bs / 1000 ft ²	185.8 gm / m ²
Burst Strength	ASTM D774	190 psi	13.0 kg / cm ²
Caliper/Thickness	Micrometer	2.8 oz / yd ²	147.3 microns
Emissivity (Foil Side)	ASTM C408	0.03	0.03
High Temperature Res.	30 min. @ 300° F	No Delamination	No Delamination
Tensile Strength (WARP)	ASTM C1136	90 lbs/inch width(MD)	15.7 kn / m
		70 lbs/inch width(XD)	12.2 kn / m (FILL)

Physical Properties based upon statistical averages. Weight / Thickness +/- 10%

Design Engineering, Inc.
36960 Detroit Road Avon, OH 44011
TEL: (440) 934-0800 FAX: (440) 934-0067
1-800-264-9472
www.designengineering.com

MATERIAL SAFETY DATA SHEET

Reflect-A-Cool™

SECTION I – IDENTIFICATION

Manufacturer: Design Engineering, Inc.
Address: 36960 Detroit Road, Avon, Ohio 44011
Phone: (440) 934-0800 **Fax:** (440) 934-0067
Date Prepared: January 1, 1998
Trade Name: Reflect-A-Cool™
Product: Self Adhesive, fiberglass backed, reflective material

SECTION II – INGREDIENTS AND HAZARD CLASSIFICATION

<u>PRODUCT INGREDIENTS (COMPONENTS)</u>	<u>CAS NUMBER</u>			
Aluminum Foil	7429-90-5			
Polymetric Adhesive				
Fiberglass Fabric				
<u>*HAZARDOUS INGREDIENTS</u>	<u>CAS</u>	<u>OSHA</u>	<u>ACGIH</u>	<u>OTHER LIMITS RECOMENDED</u>
Respirable Fiberglass Dust	Not Assigned	5mg/m ³	10mg/m ³	

* Substances listed in the hazardous ingredients section are those that have been determined to be health hazards and are present at a concentration of 1.0% or greater, or 0.1% if the substance is on the list of potential carcinogens cited in the OSHA Hazard Communications Standard.

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

<u>Boiling Point:</u>	N/A	<u>Vapor Pressure (mm Hg):</u>	N/A
<u>Solubility in water:</u>	Insoluble in water	<u>Specific Gravity:</u>	Not determined
<u>Vapor Density:</u>	N/A	<u>Percent Volatile by Weight:</u>	N/A
<u>Appearance and odor:</u>	Aluminum Foil/Fiberglass fabric lamination. No Odor		

SECTION IV – FIRE AND EXPLOSION DATA

<u>Flash Point:</u>	N/A	<u>Flammable Limits:</u>	Non-flammable
<u>LEL:</u>	Not applicable	<u>UEL:</u>	Not applicable
<u>Extinguishing Media:</u>	Foam, Dry Chemical, Fog, Water	<u>Auto Ignition Temperature:</u>	Not applicable
<u>Special Fire Fighting Procedures:</u>	None	<u>Unusual Fire and Explosion Hazards:</u>	None

SECTION V – REACTIVITY DATA

<u>Stability:</u>	Stable.	<u>Incompatibility:</u>	None.
<u>Hazardous Decomposition Products:</u>	Under fire conditions product will decompose and produce carbon dioxide, Carbon monoxide, water, and or other organic vapors.		
		<u>Hazardous Polymerization:</u>	Should not occur.

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SECTION VI – HEALTH HAZARD DATA

Eye Contact:

Acute: Mechanical Irritant
Chronic: None Known

Skin Contact:

Acute: Mechanical Irritant
Chronic: None Known

Skin Absorption:

Acute: None Known
Chronic: None Known

Ingestion:

Acute: Not likely
Chronic: Not likely

Inhalation:

Acute: Mechanical Irritation – Mouth, Nose, Throat

Chronic: None Known

Signs and Symptoms of Exposure: Direct skin contact with fibrous glass or it's dust may cause mechanical irritation and transitory dermatitis. Breathing of fibers may cause mechanical irritation of the mouth, nose, and throat.

Medical Conditions Generally Aggravated by Exposure: Dermatitis.

First Aid

Eyes: Immediately flush eyes with water for 15 minutes

Skin: Rinse with cool water followed by washing with mild soap to remove accumulated fiberglass fibers.

Inhalation: Negligible. Remove to fresh air.

Ingestion: Not likely to occur through normal use.

Carcinogenicity: Not Listed as Carcinogen

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or Leak Procedures

N/A

Waste Disposal Method

Dispose as non-hazardous waste in accordance with local, State, Federal regulations.

SECTION VIII – CONTROL MEASURES

Respiratory Protection

Not required for normal use. If abnormal use creates dust use a OSHA/NIOSH approved respirator.

Ventilation

Under ordinary conditions of use for its intended purpose, no special ventilation is required.

Protective Gloves

Not normally required. Workers with sensitive skin may be required to use gloves.

Eye Protection

Not required for normal use.

SECTION IX – HAZARD CLASSIFICATION

IMO Hazard Class and Number: Non-hazardous. **UN Number:** Not applicable.

US DOT Hazard Class: Not regulated by DOT **US DOT Identification Number:** Not applicable.

The information presented in this MSDS is believed to be factual. However, nothing contained in this information is to be taken as a warranty of any kind. The user should review any recommendations, in the specific content use, to determine whether they are appropriate.

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