



423 McFarlan Road
Kennett Square, PA 19348
R-50 VIP ROOF/WALL PANEL

Phone: 888-483-2880
E-Mail: info@R-50.com

VIP PANEL - SDS

Administrator
R-50 Systems LLC

Barrier Film

The customer is only exposed to the barrier film. Thermal Visions recommends that if a panel failure occurs, the panel be returned to Thermal Visions in the barrier film for remanufacture

Safety Data Sheet

Section 1 – Product Identification

Manufacturer Name: Thermal Visions, Inc.	Emergency Telephone Number: 740-973-3671 Day
Address (Number, Street, City, and Zip Code) 83 Stonehenge Dr., Granville, OH 43023	Chemical Name and Synonyms N/A
	Product Name CLC617
	Chemical Family Metalised polyesters and EVOH layers laminate
	Date Prepared 07/31/09

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity common Name(s))	OSHA PEL	ACGIH TLV	Other limits Recommended	% (optional)
Thermal Visions Item CLC617 (Polyesters, Aluminum, EVOH) Polyester film is made from polyethylene terephthalate, CAS # 25038-59-9. Ethylene copolymer-vinyl alcohol, CAS # 26221-27-2 Polyurethane cured adhesive.	N/A	N/A	N/A	100
Boiling Point	N/A	Density	0.88-1.41g/cm ³	
Vapor Pressure (mm Hg)	N/A	Softening Point	N/A	
Vapor Density(Air=1)	N/A	Evaporation Rate (Butyl Acetate=1)	N/A	

Solubility in Water

Insoluble

Appearance and Odor

No Odor

Section 3 - Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N/A	UEL N/A
----------------------------------	-------------------------	------------	------------

Extinguishing Media

Water fogs, foam, dry chemicals, carbon dioxide, carbon monoxide, terphthalate acid, and aldehydes.

Special Fire Fighting Procedures

As appropriate for surrounding material equipment. Film remaining in contact with flame will ignite and continue to burn slowly, dropping flaming liquid, which can spread the fire. If flame source is stationary, the film will shrink away and self extinguish.

Unusual Fire Explosion Hazards

Combustion or thermal decomposition yields Terphthalic Acid, Carbon Dioxide, Carbon Monoxide, Hydrogen chloride gas, small molecular weight Alcohols/Aldehydes.

Section 4 - Reactivity Data

Stability	Unstable		Conditions to Avoid Contact with strong acids and bases, high temperatures
	Stable	X	

Incompatibility (Material to Avoid)

Strong Acids and Bases

Hazardous Decomposition or Byproducts

Above the decomposition temperature the major volatiles will be terphthalic acid, Carbon dioxide, carbon monoxide and small molecular weight alcohols / aldehydes.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section 5 - Health Hazards Data

Routes of Entry	Inhalation?	Skin?	Ingestion?
	NO	NO	Not Likely
Health Hazards(Acute and Chronic)	None		

Carcinogenicity:	NTP.?	IARC Monographs?	OSHA Regulated?
	No	No	No

Signs and Symptoms of Exposure:
N/A

Medical Conditions
Generally Aggravated by Exposure

Emergency and First Aid Procedures
not required

Section 6 - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled
Pick up film to prevent slipping hazard

Waste Disposal Method
Dispose of in accordance with Federal, State and local regulations.

Precautions to be taken in handling and Storing
No anticipated hazards under conditions normally accoutered

Other Precautions

Section 7 - Control Measures

Respiratory Protection (Specify Type)
not required

Ventilation	Local Exhaust At Temp. Over 235°C	Special N/A
NORMAL	Mechanical (General) N/A	Other N/A

Skin Contact
If symptoms develop, obtain medical attention.

Eye Protection
Irrigate with eyewash solution or clean water, holding the eyelids apart.

Other Protective Clothing or Equipment
not required

Work/Hygienic Practices
N/A

THRESHHOLD™ Core Material
Customer is not exposed unless they remove the barrier film

Safety Data Sheet

Section 1 - Product Identification

Trade Name:	THRESHHOLD™ (Glass microfiber nonwoven mats)
Manufacturer:	Thermal Visions, Inc.
Address:	83 Stonehenge Rd. Granville, Ohio 43023
Phone:	740-973-3671

Section 2 - Product Ingredients

Ingredients:	Borosilicate Glass (CAS# 65997-17-3)
--------------	--------------------------------------

Section 3 - Physical Data

Boiling Point (°F):	Not Applicable
Vapor Pressure (mm Hg):	Not Applicable
Vapor Density (Air + 1):	Not Applicable
Evaporation Rate (Butyl Acetate = 1):	Not Applicable
Specific Gravity (H ₂ O = 1):	2.48 - 2.55
Water Solubility (%):	Negligible
Softening or Melting Point (°F):	1260 - 1380
Appearance and Odor:	White, odorless staple fiber

Section 4 - Fire & Explosion

Flash Point (Method):	Nonflammable
Extinguishing Media:	No fire hazard
Fire Fighting Procedures:	Not Applicable
Fire and Explosion Hazards:	Not Applicable

Section 5 - Reactivity Data

Stability:	Material is stable. No hazardous reactions are expected.
Chemical Incompatibilities:	Hydrofluoric Acid
Conditions to Avoid:	None in designed use
Hazardous Decomposition Products:	Not Determined
Hazardous Polymerization:	Material does not polymerize

Section 6 - Health Hazards

A. Threshold Limit Value (TLV), and Permissible Exposure Limit (PEL):

<u>OSHA</u>	<u>NIOSH</u>	<u>ACGIH</u>	<u>EPA</u>	<u>Thermal Visions Exposure Guideline</u>
10 mg/m ³	3 fibers/cc	10 mg/m ³	none	1 fibers/cc

B. Route(s) of Exposure: Inhalation, skin, eye contact, ingestion

C. Effects of Overexposure:

- Inhalation: Pre-existing respiratory or lung diseases may be aggravated. Mild irritation to upper respiratory tract.
- Skin: Fibers larger than 5 microns in diameter may cause mild irritation.
- Eyes: Irritation
- Ingestion: May cause minor, temporary irritation.

D. First Aid/Emergency Procedures:

- Inhalation: Remove to fresh air. If irritation persists, obtain medical attention.
- Skin: Wash with soap in cool salt water. If irritation persists, obtain medical attention.
- Eyes: Flush eyes with water for 15 minutes and obtain medical attention.
- Ingestion: Remove from situation where ingestion occurs. If irritation persists beyond 24 hours, seek medical attention.

E. Chronic Health Effects:

Man-made vitreous fibers in the form of wools have been widely used in thermal and acoustical insulation and in other manufactured products in Europe and North America for over 50 years. These products including glass wool, rock (stone) wool and slag wool have been extensively studied to establish whether fibers released during manufacture, use, or removal of these product present a risk of cancer when inhaled. The preponderance of epidemiologic studies published provide no evident of increased risks of lung cancer or of mesothelioma from occupational exposures during manufacture of these materials and inadequate evidence overall of cancer risk. The more commonly used vitreous fiber wools including insulation glass wool, rock wool and slag wool are now considered by IARC (International Agency for Research) not classifiable as to carcinogenicity to humans (i.e. classified as Group 3).

Section 7 - Spill or Leak Procedures

- Procedure for spill or leak: Not Applicable
- Waste Disposal Method: Comply with Federal, State, and/or local disposal-landfill regulations.
- Handling and Storing Precaution: For optimal use, keep in dry environment.

Section 8 - Personal Protection Information

Where excessive inhalation and handling occur, requirements for personal protective equipment shall be as approved under the provisions of 24 CFR 1910, subpart 1:

- Inhalation: Where the concentration of airborne fibers exceed 1 fiber/cc, local ventilation and half face piece NIOSH approved HEPA respirators are recommended.
- Skin: Protective clothing should be worn to prevent contact with skin.
- Eyes: Eye protection should be worn to prevent contact with eyes.
- Washing: To remove glass fibers from skin, wash with lukewarm water and soap. Wash exposed clothing separately from other clothes.

Desiccant

Customer is not exposed unless they remove from the barrier film

Safety Data Sheet

Effective Date September 17, 2002
MSDS Number M143

Section 1 – Product and Company Information

Product Name: StripPax, Calcium oxide

Product Use: Desiccant, absorbent
Grades: Calcium oxide
Synonyms: Quicklime, burnt lime, unslaked lime, calcia, calx, pebble lime, CaO

Company: Multisorb Technologies, Inc.
Street Address: 325 Harlem Road
City, State, Zip, Country: Buffalo, NY 14224-1893 USA

Telephone Number: (716) 824 8900 [USA] Monday - Friday (8:00 - 5:00 EDT)
Fax Number: (716) 824 4091 [USA]
Website: multisorb.com

Section 2 – Composition / Information on Ingredients

Component Name	CAS Number	% by Weight
Calcium oxide	1305-78-8	85 - 95
High density polyethylene fiber	9002-88-4	5 - 15

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

Section 3 – Hazard Identification

Emergency Overview: A white packet containing white granular material that poses little or no immediate hazard. This material is not combustible.

Potential Health Effects:

Eyes: None

Skin: None

Ingestion: Ingestion is unlikely, but if ingested, blockage may occur. This product gets hot as it absorbs moisture and burns to moist body tissue can result. Get medical attention.

Inhalation: None

Medical Effects Generally None
Aggravated by Exposure:

Chronic Effects/Carcinogenity: None

Section 4 – First Aid Measures

Eyes: Rinse the eyes well with water while lifting the eye lids. If irritation persists, consult a physician.

Skin: Wash affected area with soap and water.

Ingestion: Ingestion is unlikely, but if ingested, blockage may occur. This product gets hot as it absorbs moisture and burns to moist body tissue can result. Give large quantities of water or milk to the person to drink. Do not give anything by mouth to an unconscious person. Get medical attention.

Inhalation: Remove the affected person to fresh air and get medical attention if necessary.

Notes to Physician: Not applicable

Section 5 – Fire Fighting Measures

Flammable Properties: Not flammable

Flash Point: Not applicable

Flammable Limits: Not flammable

Method: Not applicable

Lower Flammability Limit: Not applicable

Upper Flammability Limit: Not applicable

Autoignition Temperature: Not applicable

Hazardous Combustion Products: Not applicable

Extinguishing Media: Use extinguishing media that is appropriate for the surrounding fire. Calcium oxide is not combustible but the high density polyethylene fiber is combustible.

Fire Fighting Instructions: The Calcium oxide is not combustible, but the high density polyethylene fiber packaging is combustible.

Unusual Fire and Explosion Hazards: Calcium oxide can generate heat as it absorbs moisture. If enough calcium oxide is present, the temperature can approach the burning temperature of paper. If this happens, flood the product with water to reduce the temperature.

Section 6 – Accidental Release Measures

Spill: Sweep or vacuum up and place the spilled material in a waste disposal container. Avoid raising dust. Wash with soap and water after handling.

Section 7 – Handling and Storage

Handling: Avoid handling the packets in a manner that may break or tear the packets open. Practice good hygienic work practices.

Storage: Store in a cool, dry location. Keep in sealed containers away from moisture. The calcium oxide will readily adsorb moisture.

Section 8 – Exposure Controls/Personal Protection

Engineering Controls: Not required.

Respiratory Protection: Not required.

Skin Protection: Light gloves will protect against abrasion and drying of the skin.

Eye Protection: Not required.

Component Name	Exposure Limits		
	OSHA PEL	ACGIH TLV	Other Recommended Limits
Calcium oxide	TWA 5mg / m ³	TWA 2 mg / m ³	NIOSH REL TWA 2 mg / m ³ IDLH 25 mg / m ³

Section 9 – Physical and Chemical Properties

Appearance:	White packets	Vapor Density:	Not applicable
Odor:	None	Boiling Point:	5162° F (2850° C) (Calcium oxide)
Physical State:	White packets	Melting Point:	275° F (135° C) (high density polyethylene fiber)
PH:	Not applicable	Solubility:	Insoluble in water
Vapor Pressure:	Not applicable	Specific Gravity:	3.4 (Calcium oxide)

Section 10 – Stability and Reactivity

Stability: Stable in sealed containers.

Conditions to avoid: Moisture and high humidity environments.

Incompatibility: Water, ethyl alcohol, boric acid, calcium chloride and interhalogens.

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur

Section 11 – Toxicological Information

This product and its components are not listed on the IARC, NTP or OSHA Carcinogen lists.

LD₅₀ / LC₅₀ Not available

Epidemiology No data available

Teratogenicity No data available

Reproductive Effects No data

Neurotoxicity No data available

Mutagenicity No data available

Section 12 – Ecological Information

Ecotoxicity Mosquito fish, TLm:240 ppm / 24 hours, Sunfish, 100 ppm / 3 hours is toxic. Vector snail, 300 ppm / 24 hours is lethal.

Environmental Fate No information reported

Physical / Chemical No information available

Section 13 – Disposal Information

Disposal Information If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Materials of a hazardous nature that contact the product during normal use may be retained on the product. The user of the product must identify the hazards associated with the retained material in order to assess the waste disposal options. Dispose according to federal, state and local regulations.

Section 14 – Transportation Information

U.S. Department of Transportation Shipping Name: Shipping name: Calcium oxide
Hazard Class: 8
UN Number: UN1910
Packing Group: III

IMO No information available

IATA No information available

RID / ADR No information available

Canadian TDG No information available

Section 15 – Regulatory Information (Not meant to be all inclusive - selected regulations represented)

TSCA Listed: Yes

DSL/NDSL (Canadian) Listed: Yes

OSHA: PEL TWA 5 mg / m³

NIOSH: REL TWA 2 mg / m³ IDLH 25 mg / m³

ACGIH: TWA 2 mg / m³

Section 16 – Other Information

HMIS – Hazardous Materials Identification System

HMIS Rating	
Health	1
Flammability	0
Reactivity	1

0 - minimal hazard, 1 - slight hazard, 2 - moderate hazard, 3 - serious hazard, 4 - severe hazard

This MSDS was prepared by: George E. Mckedy
Senior Applications Development Specialist
Multisorb Technologies, Inc.

This data and recommendations presented in this data sheet concerning the use of our product and the materials contained therein are believed to be correct but does not purport to be all inclusive and shall be used only as a guide. However, the customer should determine the suitability of such materials for his purpose before adopting them on a commercial scale. Since the use of our products is beyond our control, no guarantee, expressed or implied, is made and no responsibility assumed for the use of this material or the results to be obtained therefrom. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be construed as a license to operate under, or a recommendation to infringe, any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.