

MATERIAL SAFETY DATA SHEET

(Essentially similar to OSHA form 174, Sept. 1985 - For Compliance with OSHA's Hazard Communication Standard, 29CFR 1910.1200)

Section I - Product Identity:

Lemon Peel™ (5790)

Manufacturer's Name:
Fiberlock Technologies, Inc.
630 Putnam Avenue
Cambridge, MA
02139-0802
Mail Address:
P.O. Box 390432
Cambridge, MA 02139-0802

Date of Preparation: February 1999
Information Telephone Number:
(617) 876-8020
Emergency Telephone Numbers:
Weekdays: (617) 876-8020
(After hours, weekends & holidays)
(978) 887-5926, or "CHEM-TEL" Emergency
Contact Number: (800) 255-3924

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENT	%	CAS. NO.	Acute Oral LD50	Acute Dermal LD50	Acute Inhalation LC50	OSHA PEL/TWA	ACGIH TLV/STEL
Dimethyl Glutarate	<30	1119-40-0	8,191 mg/kg (Rat)	2,250 mg/kg (rabbit)	11 mg/l (rat)	NONE ESTABLISHED	NONE ESTABLISHED
1-Methyl-2-Pyrrolidone	<60	872-50-4	4200 mg/kg (Rat)	8000 mg/kg (rabbit)	No evidence of toxic effects	NONE ESTABLISHED	100 PPM (EST)
Dimethyl Adipate	<10	627-93-0	8,191 mg/kg (Rat)	2,250 mg/kg (rabbit)	11 mg/l (rat)	NONE ESTABLISHED	NONE ESTABLISHED
Dimethyl Succinate	<12	106-65-0	8,191 mg/kg (Rat)	2,250 mg/kg (rabbit)	11 mg/l (rat)	NONE ESTABLISHED	NONE ESTABLISHED

Section III - Physical/Chemical Characteristics (See reference note(s) No. 1, 2 on Reverse)

Boiling Points of Major Constituent:	Not Established	Specific Gravity (H ₂ O=1) Wgt./gal.	1.06 lbs./gal.
Vapor Pressure (mm Hg) @ 100°C	Not Established	Melting Point Water (Ice)	N/A
Vapor Density (AIR=1) Heavier Lighter	X	Evaporation Rate (Butyl Acetate=1)	0.7
Solubility in Water	Partial	Appearance: Odor:	Bright Yellow Citrus

Section IV - Fire and Explosion Hazard Data

Flash Point: 212°F SETA	Flammable Limits: LEL: N/A UEL: N/A	DOT Proper Shipping Name: Paint Product	DOT ID#: Not Regulated	Marking: "Keep from Freezing"
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Extinguishing Media: Use water fog, foam, dry chemical or CO₂. Do not use a direct stream of water. Product will float and can be reignited on surface of water.

Special Fire Fighting Procedures and Precautions: Caution, combustible. When heated above flash point, releases vapors. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Vapors may accumulate and travel to ignition sources distant from the handling site; Flash Fire can result. Fine sprays/mist may be combustible at temperatures below normal flash point. Keep liquid and vapor away from heat, sparks and flame. Container, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers. Static electricity may accumulate and create a fire hazard. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Contained areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

Section V - Reactivity Data

Hazardous Polymerization: Will not occur.

Stability: Stable

Incompatibility/Conditions and materials to avoid: Avoid heat, flame and contact with strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and unidentified organic compounds may be formed during combustion.

Section VI - Health Hazard Data/Toxicity Data

The health effects noted below are consistent with requirements under the OSHA hazard communications standard (29 CFR 1910.1200).

EFFECTS OF OVEREXPOSURE: **Eye Contact:** Liquid is severe irritant to the eyes. No permanent damage. **Skin Contact:** Liquid is irritating to the skin. Prolonged or repeated liquid contact can result in defatting and drying of the skin which may result in skin irritation and severe dermatitis, e.g. blisters, cracking, edema, redness. **Inhalation:** Vapors may cause irritation to nose, throat, and respiratory tract. **Ingestion:** Very low toxicity by ingestion. **Signs and Symptoms:** Irritation as noted above. Early to moderate CNS (Central Nervous System) depression may be evidenced by giddiness, headache, dizziness and nausea; in extreme cases, unconsciousness and death may occur. **Aggravated Medical Conditions:** Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to this product.

EMERGENCY AND FIRST AID PROCEDURES: **Eye Contact:** Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention. **Skin Contact:** Remove contaminated clothing/shoes. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. **Inhalation:** Remove victim to fresh air and provide oxygen if breathing is difficult. **Ingestion:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Supplemental Health Information: Overexposure may cause blurring of vision.

Section VII: Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Stop dike flow, dike spill, absorb with inert material (e.g. sand, earth).

WASTE DISPOSAL METHOD: The coating and any contaminated diking material should be thoroughly air dried and collected into a container. The containers should then be sealed and properly labeled with waste designation and landfill or incinerated according to current local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Maximum storage temperature 100°F. Keep closure tight and container upright to prevent leakage. Precautionary labeling: "Keep from Freezing". Department of Transportation (D.O.T.) Proper shipping name: Paint Product UN 1263.

OTHER PRECAUTIONS: Do not get in eyes. Avoid skin contact. Prevent prolonged or repeated breathing of vapor mists. Do not handle until the manufacturer's safety precautions and label instructions have been read and understood. Avoid breathing sanding dust.

Section VIII: Control Measures

RESPIRATORY PROTECTION: Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational exposure limits (Section II) use a NIOSH-approved respirator to prevent overexposure. In accord with 29CFR 1910, 134 use either an atmosphere supplying respirator or an air-purifying respirator for organic vapors. Use approved chemical/mechanical filters designed to remove particulates in open and restricted ventilation areas. Use MSHA/NIOSH-approved airline type respirator or hood in confined areas. OSHA has established transitional occupational exposure limits for this product and/or components of this product. Refer to 29 CFR 1910.1000 for these transitional limits and requirements for meeting these limits.

VENTILATION: Air-dry contaminated clothing in a well ventilated area then launder before reusing. Sufficient ventilation, in pattern and volume, should be provided to keep the air contaminant concentration below applicable exposure limits. All application areas should be ventilated in accordance with OSHA regulation 29CFR Part 1910.94.

PROTECTIVE GLOVES: Avoid prolonged or repeated contact with skin. Wear chemical resistant gloves and other clothing as required to minimize contact. Test data from published literature and/or glove and clothing manufactures indicate the best protection is provided by nitrile material.

EYE PROTECTION: Avoid contact with eyes. Use safety eyewear including side shields, face shields, or chemical splash goggles (ANSIZ-87.1 or approved equivalent).

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Use protective cream if prolonged skin contact is likely.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using the washroom. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is being applied.

References:

1. Sax, N.I., "Dangerous Properties of Industrial Materials", 8th ed., Van Nostrand Reinhold Company, Inc., NY, 1992.
2. American Conference of Governmental Industrial Hygienists, "TLV's and Biological Exposure Indices" for the current year (published annually).
3. U.S. Code of Federal Regulations (CFR) U.S. Dept. of Labor, No. 29, Parts 1900 to 1910.1200. OSHA Communications Standard 29 CFR 1910.1200.
4. Sax, N.I., R.J. "Hazardous Chemicals Desk Reference", Van Nostrand Reinhold Co., Inc., NY, 1987.
5. Fire Protection Guide to Hazardous Materials, 10 ed., National Fire Protection Association, Quincy, MA, 1991.
6. Title III List of Lists, U.S. Environmental Protection Agency publication EPA 560/4-90-011, January 1990.

SUPPLEMENTAL INFORMATION

To comply with New Jersey DOH Right-To-Know labeling law (N.J.A.C. 8:59 - 5.1 & 5.2)

CAS. No.:
1119-40-0
872-50-4
627-93-0
106-65-0

CHEMICAL INGREDIENTS:
Dimethyl Glutarate
1-Methyl-2-Pyrrolidone
Dimethyl Adipate
Dimethyl Succinate

HMIS HAZARD RATING			
Health 2	Flammability 1	Reactivity 0	Personal Protection G
HAZARD INDEX			
0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe			
PERSONAL PROTECTION CODE			
G=Safety Glasses, Gloves, Vapor Respirator			