

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:

Manufacturer's Name:
Fiberlock Technologies, Inc.
150 Dascomb Road
Andover, MA 01810

Piranha® IV (5740)

Date of Preparation: August 15, 2002
Information Telephone Number: (978) 623-9987
Emergency Telephone Numbers:
Weekdays: (978) 623-9987
After hours, weekends & holidays: (978) 887-5926,
or "CHEM-TEL" Emergency Contact Number: (800) 255-3924

Section II - Hazardous Ingredients/Identity Information/Toxicity Data/Occupational Exposure Limits

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

**Acute Toxicity Data based on either product or essentially similar product testing.

Section III - Physical/Chemical Characteristics

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	Not Established	Evaporation Rate (Butyl Acetate=1)	Not Established
Solubility in Water	Partial	Appearance: Odor:	Blue colored liquid Sweet odor

Section IV - Fire and Explosion Hazard Data

Flash Point: 212°F SETA	Flammable Limits 1% Volume in Air: Lower: Not Established Upper:	DOT Proper Shipping Name: Paint Product	DOT ID#: Non Regulated	Marking: "Keep from Freezing"
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Fire and Explosion: 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. Fine sprays/mist may be combustible at temperatures below normal flash point. 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. 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. Cool fire exposed containers with water. Unusual Fire and Explosion Hazards: 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. Special Precautions: Keep liquid and vapor away from heat, sparks and flame. Surfaces that are sufficiently hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone. Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can result. Keep containers closed when not in use. Use with adequate ventilation. Containers, 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. Ground fixed equipment. Bond and ground transfer containers and equipment.

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 Communication Standard (29 CFR 1910.1200))

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 and 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. Give artificial respiration if not breathing. 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

Spill or Leak Procedures: Caution. Flammable. Large spills: Eliminate potential sources of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material; place in non-leaking containers and seal tightly for proper disposal. Flush area with water to remove trace residue; dispose of flush solution as above. Small Spills: Take up with an absorbent material and place in non-leaking containers for proper disposal.

Section VIII: Employee Protection

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.

PROTECTIVE CLOTHING: Avoid contact with eyes. Wear safety goggles or glasses as appropriate. 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 manufacturers indicate the best protection is provided by nitrile material.

ADDITIONAL PROTECTIVE MEASURES: Air-dry contaminated clothing in a well ventilated area then launder before reusing.

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	Physical Hazard 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			

Environmental Data Sheet (supplement to MSDS)

PRODUCT COMPOSITION AND SARA TITLE III INFORMATION

COMPONENT	%	CAS. NO.	EHS RQ (LBS)	EHS TPQ (LBS)	SEC 313	313 CATEGORY	311/312 Categories	EHS = Extremely Hazardous Substance RQ = Reportable Quantity TPQ = Threshold Planning Quantity SEC = Section
Mixture	100							
Dimethyl Glutarate	<30	1119-40-0					ACUTE HEALTH HAZARD	
1-Methyl-2-Pyrrolidone	<60	872-50-4					ACUTE HEALTH HAZARD	
Dimethyl Adipate	<10	627-93-0					ACUTE HEALTH HAZARD	
Dimethyl Succinate	<12	106-65-0					ACUTE HEALTH HAZARD	

RCRA INFORMATION

Under EPA - RCRA (40 CFR 261.21, If this product becomes a waste material, it would be ignitable hazardous waste, hazardous waste number D001. Refer to latest EPA or state regulations regarding proper disposal.

STATE/OTHER REGULATORY INFORMATION AND SPECIAL NOTES:

In accordance with SARA Title III, Section 313, the EDS should always be copied and sent with the MSDS. This product is listed on the EPA/TSCA inventory of chemical substances. This information is being systematically repeated to our MSDS. It has previously been provided to you in various ways, including the MSDS. The new MSDS format is intended to provide the user with the information in a more convenient manner. The new MSDS format is intended to provide the user with the information in a more convenient manner. The occupational exposure limits and/or the respiratory protection precautions have been revised.

The information contained herein is based on the data available to us and is believed to be correct. However, the occupational exposure limits and/or the respiratory precautions have been revised. Fiberlock Technologies, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Fiberlock Technologies, Inc. assumes no responsibility for injury from the use of the product described herein.