

## Material Safety Data Sheet

Revision Date: 05/12  
Version 2.0

Print Date: 08/30/12  
MSDS Identification: 4410FS - Part B

Polyalcohol Emulsion, Urethane Resin

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : 4410FS - Part B

Product Use Description : Polyalcohol Emulsion, Urethane Resin

Company : Protective Floorings and Linings  
A Division of Milamar Coatings, LLC  
311 N.W. 122nd St, Suite 100  
Oklahoma City, OK 73114

Telephone : 405-755-8448

Emergency Telephone Number: ChemTel 800-255-3924 or 813-248-0585 (International)

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Vegetable Oil	Trade Secret	38% - 48%
Butyl Benzyl Phthalate	85-68-7	12% - 20%
Glycerin	56-81-5	1% - 5%

Chemical Family: Aromatic Isocyanate

#### Vegetable Oil

OSHA : 5.00 mg/m3 TWA Respirable Fraction  
ACGIH : Not Established

#### Butyl Benzyl Phthalate

OSHA : Not Established  
ACGIH : Not Established  
UK OES : 5.00 mg/m3 TWA

#### Glycerin

OSHA : 5.00 mg/m3 TWA Respirable Fraction  
15.00 mg/m3 TWA Total Dust  
ACGIH : 10.00 mg/m3 TWA Mist

### 3. HAZARDS INFORMATION

#### Emergency Overview

WARNING!  
Possible pulmonary (lung) irritation.

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May cause allergic respiratory reaction.  
May be harmful if inhaled.  
May cause skin irritation.  
May cause allergic skin reaction.  
May be harmful if absorbed through the skin.  
Causes eye irritation.  
May be harmful if swallowed  
Toxic gases / fumes are given off during burning or thermal decomposition.

Potential Health Effects

Route(s) Of Entry

Skin : Inhalation; Skin Contact; Eye Contact; Ingestion

Human Effects And Symptoms Of Overexposure

Acute Inhalation : Vapors and mists of this product can be irritating to the mucous membranes and respiratory tract. Symptoms may include sore throat, coughing, shortness of breath, headache and dizziness. The vegetable oil component of this product may cause allergic asthmatic reaction in persons previously exposed. At elevated temperatures the generated vapor or mist of this product may cause irritation and dehydration of the mucous membranes of the respiratory tract. The butyl benzyl phthalate component may cause irritation and central nervous system depression if sufficient quantities are absorbed.

Chronic Inhalation : None reported for this product as a whole. Expected to be similar to effects listed for acute inhalation. However, chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage. Symptoms can include: loss of memory, loss of intellectual ability and loss of coordination.

Acute Skin Contact : Repeated skin contact with this product may result in dry, defatted and cracked skin causing increased susceptibility to infection. In addition, irritation (i.e. redness and swelling that may develop into dermatitis may occur from skin contact. Allergic reactions may occur in some individuals.

Chronic Skin Contact : None reported for this product as a whole. It is expected that repeated or prolonged contact may cause dermatitis.

Acute Eye Contact : Liquid, aerosols and concentrated vapors of this product can be irritating to the eyes causing a stinging sensation, tearing, reddening and possibly swelling of the eyes. If left untreated, corneal injury can occur and injury is slow to heal. Damage is usually reversible.

Chronic Eye Contact : None reported for product as a whole. Based on component information prolonged vapor contact may cause conjunctivitis.

Acute Ingestion : The product can cause gastrointestinal distress and can result in irritation in the digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. May also cause central nervous system depression with headache, dizziness and drowsiness. Aspiration of the vegetable oil may result in lipid pneumonia.

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Chronic Ingestion	:	None Reported
Carcinogenicity	:	The components of this product are not listed by NTP, IARC or other regulated carcinogen by OSHA.
Aggravated Medical Condition	:	
Aggravated By Exposure	:	With repeated or prolonged contact this product may aggravate an existing dermatitis or other allergic reactions, as well as existing respiratory conditions.

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## 4. FIRST AID MEASURES

Eye Contact	:	Flush immediately with clean, lukewarm water (low pressure) for at least 15 minutes, while using fingers to hold eyelids open. Obtain medical attention if irritation develops or persists.
Skin Contact	:	Immediately remove contaminated clothing and shoes. Wash affected areas thoroughly with soap and lukewarm water. Wash contaminated clothing and clear shoes thoroughly before reuse. If irritation develops or persists, contact a physician.
Inhalation	:	If breathing is difficult, immediately remove from area to fresh air. If individual has stopped breathing administer oxygen. Obtain medical attention.
Ingestion	:	Do not induce vomiting. Give 1 to 2 cups of water or milk to drink. Do not give anything by mouth to an unconscious or convulsing person. Consult a physician. Should vomiting occur keep head lower than hip level to prevent aspiration of fluid into the lungs.

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## 5. FIRE-FIGHTING MEASURES

Flash Point	:	Greater than 212 degrees F (100 C)
Flammable Limits	:	
Upper Explosive Limit UEL (%)	:	1.5% @ 200 C PMA.
Lower Explosive Limit LEL (%)	:	7.0% @ 200 C PMA.
Auto-ignition Temperature	:	Approximately 707 degrees F (375 C) - similar product.
Extinguishing Media	:	Carbon Dioxide; Dry Chemical; Foam; Water spray for large fires.
Special Fire Fighting Procedures	:	Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, irritating toxic gases and smoke are present from decomposition and combustion. Use water to cool fire-exposed containers to prevent rupture. Solid residue will support combustion after the water has evaporated.

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## 6. ACCIDENTAL RELEASE MEASURES

Spill Or Leak Procedures	:	Evacuate all non-essential personnel. Ventilate the area. Equip cleanup crew with
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appropriate protective equipment. Dike or impound spilled material and control further spillage if feasible. Do not allow spilled material to get into the sewer systems, the ground water supplies or soil. Notify appropriate authorities if necessary. Cover spill with sawdust, vermiculite, Fuller's earth or other absorbent material. Collect material in open containers. Remove containers to safe place and cover. Flush spill area with water.

## 7. HANDLING AND STORAGE

Storage Temperature (MIN / MAX)	:	32 degrees F (0 degrees C) / 120 degrees F (50 degrees C) - contains water - keep from freezing.
Shelf Life	:	Not established.
Special Sensitivity	:	Material contains water and can freeze at temperatures at or below 32 degrees F (0 degrees C). Do not store material at or below 32 degrees F (0 degrees C)
Handling And Storage Precautions	:	Protect from freezing. Containers should be tightly sealed to prevent contamination with foreign materials. Store in a cool and well ventilated area in original or similar container. Avoid product temperatures above 120 degrees F (50 C) and below 32 degrees F (0 degrees C). Do not get material in the eyes or on the skin. Avoid breathing vapors or mist if generated.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection Requirements	:	Liquid chemical goggles or face shield. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face-shield.
Skin Protection Requirements	:	Permeation resistant gloves (butyl rubber, nitrile rubber). Cover as much of the exposed skin area as possible with appropriate clothing (long sleeve shirts, trousers). If skin creams are used, keep the area protected only by the cream to a minimum.
Ventilation Requirements	:	Exhaust ventilation sufficient to keep the airborne concentrations of the hazardous constituents below applicable exposure limits must be utilized. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the buildup of explosive atmospheres and to prevent off gases from entering the workplace. In addition, a respirator that is recommended or approved for use in organic vapor containing environments (air purifying or fresh air supplied) may be necessary. In spray applications an organic vapor / particulate respirator or air supplied unit is necessary. Consider type of application and environmental concentrations. Take into account other materials being used concurrently. Observe OSHA regulations for respirator use (29 CFR 1910.134)
Additional Protective Measures	:	Safety showers and eyewash stations should be easily accessible to the work area. Educate and train employees in safe use of product. Follow all label instructions.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Form	:	Thixotropic Liquid.
Appearance	:	Cloudy.
Color	:	White.
Odor	:	Weak Odor.
pH	:	Approx. 7.2.
Boiling Point	:	Approx 208.4 degrees F (98 degrees C)
Melting / Freezing Point	:	Less than or equal to 32 degrees F (0 degrees C) (water)
Viscosity	:	Approximately 210 mPa.s at 68 degrees F (20 degrees C).
Solubility In Water	:	Miscible.
Specific Gravity	:	Approx. 1.00 g / cm <sup>3</sup> at 68 degrees F (20 degrees C).
Bulk Density	:	Not Noted.
Vapor Pressure	:	Approximately 33 mbar @ 68 degrees F (20 degrees C). Approximately 101 mbar @ 120 degrees F (50 degrees C). Approximately 132 mbar @ 131 degrees F (55 degrees C).
Vapor Density	:	None Established.

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## 10. STABILITY AND REACTIVITY

Stability	:	This is a stable material.
Hazardous Polymerization	:	Will not occur.
Incompatibles	:	Strong oxidizing agents, reducing agents, acids, alkalis.
Instability Conditions	:	Temperatures below 32 degrees F (0 degrees C) - Product will freeze
Decomposition Products	:	By fire: oxides of carbon, oxides of nitrogen, and other unknown aliphatic fragments.

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## 11. TOXICOLOGICAL INFORMATION

Toxicity Data For	:	Vegetable Oil.
Acute Toxicity	:	
Eye Effects	:	500mg - Rabbit - mild.
Skin Effects	:	100 mg / 24 hours Rabbit - severe.
Fate and Transport	:	Bioconcentration: 480 ug/L 14 days BCF (Residue) Common, mirror, colored, Carp (Cyprinus carpio) 0.86 ug/L.

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Toxicity Data For	:	Butyl Benzyl Phthalate.
Acute Toxicity	:	
Oral LD50	:	2330 mg / kg (Rat)*
Dermal LD50	:	6700 mg / kg (Rat)*
Other Acute Effects	:	Animal studies report that central and peripheral neuropathies may occur. Mammals exposed to 13,000 mg / m3 suffer somnolence, withdrawal, weight loss and death of 50% of the animals tested.*
Chronic Toxicity	:	Chronically fed rats exhibited leukemia and lymphomas, including Hodgkin's disease. Male rats chronically fed exhibited effects on the reproductive organs.*

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## 12. ECOLOGICAL INFORMATION

Ecology Data For	:	Butyl Benzyl Phthalate.
Fish Toxicity	:	LC50: 510 ug / L for 96 hours (Mortality), Shiner perch (Cymtogaster aggregate)*
Invertebrate Toxicity	:	EC50: 6900 ug / L for 48 hours (Shell Deposition), American or virginia oyster (Crassostrea virginica)*.
Plant Toxicity	:	EC50: 170 ug / L for 96 hours (Photosynthesis). Diatom (Skeletonema costatum)*.

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## 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	:	Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.
Empty Container Precautions	:	Empty containers retain product residue (liquid and / or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

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## 14. TRANSPORT INFORMATION

Technical Shipping Name	:	Polyalcohol Emulsion containing Butyl Benzyl Phthalate.
Freight Class Bulk	:	Chemicals, NOI.
Freight Class Package	:	Chemicals, NOI, NMFC 60000.
Product Label	:	Product Label Established.
DOT	:	(Domestic Surface).
Proper Shipping Name	:	Environmentally Hazardous Substance, Liquid, N.O.S. (Polyalcohol Emulsion Containing Butyl Benzyl Phthalate), 9,III, UN3082
Hazard Class Or Division	:	9

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UN / NA Number : UN3082  
Packing Group : III  
DOT Product RQ lbs (kgs) : 500 lbs (226.8 kgs)  
Hazard Label(s) : Class 9  
Hazard Placard(s) : Class 9

\* When in individual containers of less than the RQ, this material ships as non-regulated.

## IMO / IMDG Code (Ocean)

Proper shipping name : Environmentally Hazardous Substance, Liquid, N.O.S. (Polyalcohol Emulsion Containing Butyl Benzyl Phthalate), 9, III, UN3082  
Hazard Class Division Number : 9  
UN Number : UN3082  
Packaging Group : III  
Hazard Label(s) : Miscellaneous  
Hazard Placard(s) : Miscellaneous

\* When in individual containers of less than the Product RQ, this material ships as non-regulated.

## ICAO / IATA (Air)

Proper Shipping Name : Environmentally Hazardous Substance, Liquid, N.O.S. (Polyalcohol Emulsion Containing Butyl Benzyl Phthalate), 9, III, UN3082  
Hazard Class Division Number : 9  
UN Number : UN3082  
Subsidiary Risk : None  
Packing Group : III  
Hazard Label(s) : Miscellaneous  
Radioactive? : Non-Radioactive  
Passenger Packing Instruction : 914  
Cargo Air - Maximum Quantity : No Limit  
Cargo Air Packing Instruction : 914

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15. REGULATORY INFORMATION

OSHA Status:This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status:On TSCA Inventory.

CERCLA Reportable Quantity:Butyl Benzyl Phthalate: 100 lbs.

SARA Title III:

Section 302 Extremely Hazardous Substances:None

Section 311 / 312 Hazard Categories:Immediate Health Hazard

Section 313 Toxic Chemicals:None

RCRA Status:If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24).

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Component Name	CAS Number	Concentration	State Code
Vegetable Oil NJTSRN (31765300002)-12213		38% - 48%	PA3, NJ4
Water	7732-18-5	20% - 30%	PA3, NJ4
Butyl Benzyl Phthalate	85-68-7	12% - 20%	PA1, PA4, MA, NJ1, NJ2, CN1
Glycerin	56-81-5	1% - 5%	PA1, MA, NJ4
n-methylpyrrolidinone	872-50-4	Approx. 0.086%	CA2

CA2 = Warning! This chemical is known to the State of California to cause birth defects or other reproductive harm.



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MA	=	Massachusetts Hazardous Substance List
NJ1	=	New Jersey Hazardous Substance List
NJ2	=	New Jersey Environmental Hazardous Substance List
NJ4	=	New Jersey Other - included in 5 predominant ingredients >1%
NJTSRN	=	New Jersey Trade Secret Registry Number
PA1	=	Pennsylvania Hazardous Substance List
PA3	=	Pennsylvania Non-Hazardous present at 3% or greater.
PA4	=	Pennsylvania Environmental Hazardous Substance List.
CN1	=	Canada WHMIS Ingredient Disclosure List over 1%.

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## 16. OTHER INFORMATION

### HMIS Ratings

Health	:	2*
Flammability	:	1
Physical Hazard	:	1

0 = Minimal, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, \* = Chronic.

Prepared By : Protective Floorings and Linings. EH&S Product Safety Department