

PermaPile™

Marine Pile Formulation

PermaPile™ is a modified elastomeric asphalt emulsion specifically formulated for application by brush or roller. **PermaPile™** is a cold applied, single component product that yields a membrane with excellent strength, elasticity and adhesion. **PermaPile™** is an environmentally friendly waterproof product that will prevent leaching of chemicals from treated timber and stop marine borers from attacking the wood. *See below

FREE OF FLAMMABLE SOLVENTS · NON-TOXIC, ODORLESS, WATER BASED EXCELLENT STRENGTH, ELASTICITY & ADHESION

PHYSICAL PROPERTIES

PROPERTY	TYPICAL RESULTS
Specific gravity (liquid) g/cm ³	Approx. 1.0
Odor	None
VOC	Contains no solvents
Color	Brown to black
% Solids (wt)	53-58
Viscosity, Brookfield, sp.#5, 20 rpm	8000-9000
pH	10-12

PERFORMANCE (Cured Membrane)

PROPERTY	TYPICAL RESULTS
Color	Black
Specific Gravity, g/cm ³	Approximately 1.0
Chemical Resistance	Resistant to most inorganic solutions. Not recommended for gasoline or other petroleum products. Consult Chemical Resistance chart for further information.
Biological Resistance ASTM E 154, ASTM D412	Passed (> 90% original value)
Impact Resistance CSB 37-GP-500 @23°C in lbs	Passed (168)
Water tightness after impact	Passed (no leakage)
Water tightness CGSB 37-GP-56	Zero Leakage
Tensile Strength ASTM D412, psi	90
Elongation, %	850
Accelerated Weathering. ASTM G155, D412	Passed (no deterioration of film)
Tensile Strength	Passed (>90% original value)
Hardness, Durometer Type 00	85-87
Surface Corrosion ASTM D610	No corrosion after 500 hours, 0.03% after 1,000 hours
Adhesion to Concrete ASTM C907	111 psi
Hardness ASTM D2246	50 Type A
Puncture Resistance CGSB 37-GP-56	No perforations
Water Vapor Transmissions ASTM E96	0.04

Application

PermaPile™ is a water-based, environmentally safe alternative to conventional hot-applied, solvent based and sheet membrane waterproofing systems. Since PermaPile™ cures by evaporation, a minimum application temperature of 40°F (4.5°C) is required. Apply in thin coats. The product cures within 24-48 hours at 70°F (21°C) and 50% relative humidity, at a thickness of 40 mils (1mm).

For best results, surfaces must be dry and free of dirt, debris, oil or grease. Application is not recommended if rain is imminent, or in high humidity environments.

PermaPile™ is applied between 12.5-25 ft²/gal (0.3-0.61 m²/litre) to produce a 40 mil (1 mm) protective membrane. PermaPile™ dries to the touch within minutes at 70°F (21°C). Curing time will vary depending on temperature and relative humidity.

LIMITATIONS

*PermaPile™ is mildly alkaline. When applying this product observe appropriate safety precautions, wear gloves, eye protection and other suitable protective equipment. For further information please consult the product MSDS.

PermaPile™ should not be applied when the ambient temperature is below 40°F (4.5°C). The uncured membrane may be damaged if frozen. Some surface base coats, such as coal tar are unsuitable for use with PermaPile™.

CAUTION

For industrial use only. Keep out of reach of children. Avoid storage below 40°F (4.5°C). Please consult the MSDS before using PermaPile™.

TECHNICAL SERVICE:
(678) 234-7584

NON-TOXIC

NO VOCs

Supplier: Gulf Synthetics, LLC 1340 Oak Industrial Lane, Suite 300, Cumming, GA 30041 • Phone: (877) 946-4853 • Fax: (678) 584-9383
THIS PRODUCT IS NOT SUBJECT TO THE CONTROLLED PRODUCTS OR THE TRANSPORTATION DANGEROUS GOODS REGULATIONS

SECTION I: MATERIAL IDENTIFICATION

TRADE NAME: PermaPile™ • EMERGENCY TELEPHONE #: (678) 584-9309

CHEMICAL FAMILY: Water suspension of petroleum derived hydrocarbons (polymer modified emulsified asphalt) and inert fillers.

MATERIAL USE: Protective Coating • T.D.G. CLASSIFICATION: NON REGULATED • WHIMIS CLASSIFICATION: NON REGULATED

SECTION II: HAZARDOUS INGREDIENTS

COMPONENT	CAS#	%(BY MASS)	LC50 (ppm) (rat inhal)	LD50 (mg/kg) (rat oral)
Complex mixture of bitumens	n/a	40-70	n/a	n/a
Anionic surfactants	n/a	0.5-2.0	n/a	n/a
Water	7732-18-5	30-60	n/a	n/a
Modifier		5-25	n/a	n/a

SECTION III: PHYSICAL PROPERTIES

Odor and appearance: Viscous brown liquid, slight resinous petroleum odor. • Odor threshold: n/a • Specific gravity: 1.00 (approx.).

Coefficient of water/oil distribution: n/a • Vapor pressure (mm Hg): 17 @20°C (water) • Boiling point: 100°C (water) • Freezing point: 0°C

pH: 7-13 • Vapor density (air = 1): > 1 • Evaporation rate (nBuAcetate = 1): <1 • Volatiles %: 40-60 (water) • Solubility in water: partially soluble

SECTION IV: FIRE & EXPLOSION DATA

Means of extinction: n/a • Sensitivity to mechanical impact/static discharge: n/a • Flash point (method): n/a (non-combustible)

Upper flammable limits %: n/a • Lower flammable limits %: n/a • Autoignition temperature: n/a • Special fire fighting instructions: n/a

Unusual fire and explosion hazards: Product will not burn but may splatter if temperature exceeds the boiling point.

SECTION V: REACTIVITY DATA

Chemical stability: Stable • Incompatible materials: Will react with alkaline sensitive materials such as acids and certain metals. Contact with reactive metals such as aluminum or magnesium will result in the formation of explosive hydrogen gas.

Hazardous decomposition products: Avoid heating above 200°C. At elevated temperatures hazardous vapors can be released, including carbon monoxide, hydrogen chloride, organic acids and aldehydes. • Hazardous polymerization: Will not occur.

SECTION VI: HEALTH INFORMATION

Exposure limit: n/a • Inhalation: n/a • Skin: adhesion • Eyes: adhesion, irritation. • Ingestion: Blockage of digestive and/or respiratory tract. Chronic effects: n/a

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: n/a Skin: This is an alkaline product. If splashed on the skin immediately wash thoroughly with fresh water. If the product has dried on the skin massage the area with medical grade mineral oil, baby oil or edible oil, then wash with soap and water. If irritation persists seek medical attention.

Eyes: Flush thoroughly with fresh water for at least ten minutes. Seek medical attention. Ingestion: DO NOT INDUCE VOMITING. Seek medical attention.

SECTION VII: SPILL PROCEDURES

In the event of a spill: Dike and contain, transfer to containers for recovery or disposal. Keep out of sewers. Waste disposal method: Follow federal, provincial and local regulations regarding disposal.

SECTION VIII: SPECIAL PROTECTION

Respiratory protection: n/a • Ventilation: n/a • Protective gloves: Recommended • Eye protection: safety glasses/splash goggles recommended.

Other protective equipment: Long sleeves, loose clothing recommended.

SECTION IX: SPECIAL PRECAUTIONS

Storage and handling conditions: Keep containers tightly closed when not in use. KEEP FROM FREEZING.

Special shipping information: Not regulated by the Transportation of Dangerous Goods Regulations.

Prepared by: Gulf Synthetics, LLC • Preparation date: 02/8/11