

DIATHON BASECOAT

ELASTOMERIC ACRYLIC WATERPROOFING

Technical Data & Application Instructions

PRODUCT DESCRIPTION

DIATHON BASECOAT is a high solids elastomeric acrylic coating to be used in conjunction with Diathon Topcoat to provide superior weatherability, ultraviolet resistance, and fire retardancy for the protection of polyurethane foam. DIATHON BASECOAT is a single-package basecoat/topcoat system designed for easy application with conventional or airless spray equipment, as well as brush or roller.

BASIC USES

DIATHON BASECOAT was specifically developed for building film thickness prior to the application of an appropriate Diathon Topcoat. The system effectively protects sprayed polyurethane foam insulation from degradation caused by normal weathering, aging and ultraviolet exposure. DIATHON is used for protection of sprayed-in-place polyurethane foam on sloped roofs, ambient and hot storage tanks, and can also be used over existing foam roofs previously coated with compatible coating systems.

COLORS

DIATHON BASECOAT is manufactured in standard Medium Gray, which requires topcoating. DIATHON Topcoat is available in White, Solar Gray, Light Tan and Tan, which are certified to meet ENERGY STAR®, Cool Roof Rating Council (CRRC) and LEED reflectance criteria. All other colors are custom matched by UNITED to meet specific project requirements. Color chips of samples must be submitted to UNITED for all custom colors.

PACKAGING & MIXING

DIATHON BASECOAT is a single component, ready-to-use material available in 5-gallon (19 liter) pails and 55-gallon (208 liter) drums.

DIATHON BASECOAT may appear well mixed, but upon standing will settle into a two-stage suspension. Thoroughly mix the contents of all containers using a power mixer for a minimum of five (5) minutes prior to application. For 5-gallon pails, use a 3" (7.5 cm) minimum diameter mixing blade; for 55-gallon drum, a 6" (15 cm) minimum diameter blade is recommended.

TYPICAL PROPERTIES

- Solids by Weight:**
67% (± 2) [ASTM D2369]
- Solids by Volume:**
51% (± 2) [ASTM D5201]
- Surface Dry Time for Foot Traffic Resistance:**
4 hours at 75°F (24°C), 50% R.H.
Light Gray at 16 wet mils (406 microns)
3 hours at 75°F (24°C), 50% R.H.
Med. Gray at 16 mils wet (406 microns)
Required times will increase @ higher humidities
- Tensile Strength:**
182 psi (± 20) (1.83 MPa)
[ASTM D2370/D6083]
- Elongation:**
135% (± 20)
[ASTM D2370/D6083]
- Hardness:**
60 to 70 Shore A
[ASTM D2240]
- Permeance:**
2.7 US perms at 22 dry mils (155 ng/(Pa.s.m²) @ 560 microns) [ASTM E96]
- Low Temperature Flexibility:**
Passes 180° flex over ½" (1.2 cm) mandrel @ -5°F (-21°C) [Federal Test Method No. 141a-6221]
- Temperature Limits For Normal Service Conditions:**
0°F to 200°F (-18°C to 93°C)
- Fire Resistance:**
UL 790 Class "B" classified system over spray-applied polyurethane foam on combustible decks, when used with Diathon Topcoats.

APPLICATION INSTRUCTIONS

DIATHON BASECOAT may be applied by either conventional or airless spray equipment. Brush or roller may be used for touch-up and edging work, or for small areas which are not practical for spray application.

DIATHON BASECOAT has been applied utilizing many different brands, types and sizes of airless or conventional spray equipment. Airless spray is best suited for large projects. Use a pump with minimum 1 gallon per minute output and 2,000 psi pressure capability. In-line filter screens should be 60 mesh or larger. Use a reversible, self-cleaning tip with orifice size of .027" to .039" and 40° to 50° fan angle.

DIATHON BASECOAT should be applied to polyurethane foam surfaces between 24 and 72 hours following final application of the polyurethane foam.

Polyurethane foam and adjacent surfaces to be coated shall be free of any degraded foam, grease, oil, dirt or other contaminants that will interfere with proper adhesion. Polyurethane foam shall be completely dry and frost-free before coating.

Any physical damage to the polyurethane foam shall be repaired before coating application commences. Any oxidized polyurethane foam shall be repaired or replaced. Do not coat directly over polyurethane foam that has been mechanically scarified or sanded.

DIATHON BASECOAT applied at the rate of one gallon per 100 sq. ft. (.41/m²) will theoretically yield 8.2 dry mils (208 microns).

The theoretical thickness given for coverage per gallon is based on smooth, non-porous surfaces. Actual gallons required in the field to achieve the minimum dry film thickness will depend upon the surface texture, method of application and weather conditions at the time of application. It is the responsibility of the applicator to apply sufficient material to achieve the minimum dry film thickness required.

Each coat of **DIATHON BASECOAT** shall be applied in a direction perpendicular to the previous coat to assure positive coverage. Each coat must be dry and cured before an additional coat is applied. **All surfaces must be uniformly coated and be free from all voids, pinholes and blisters.**

If any form of dirt, sand or pollution fallout is detected on the surface of **DIATHON BASECOAT**, it is necessary to remove this material before applying an additional coat.

DIATHON BASECOAT is very cohesive and difficult to spray at material temperatures below 60°F (16°C). Store product in a warm area prior to application to bring material temperature to 70°F (21°C) or greater.

Use water and detergent to thoroughly flush equipment. Purge the water from the system using Mineral Spirits. Leave the solvent in the lines and equipment until next use. It is **not** recommended practice to leave **DIATHON BASECOAT** in the pump or hoses.

LIMITATION & PRECAUTIONS

DIATHON BASECOAT should not generally be used over cold storage tanks or buildings where a vapor barrier coating is required. **DIATHON BASECOAT** shall not be used for interior applications in place of a thermal barrier.

DIATHON BASECOAT will freeze and become unusable at temperatures below 32°F (0°C). Do not ship or store unless protection from freezing is available.

Do not apply **DIATHON BASECOAT** at temperatures below 50°F (10°C), or when there is a possibility of temperatures falling below 32°F (0°C) within a 24-hour period after application. **DIATHON BASECOAT** requires complete evaporation of water to cure. Cool temperatures and high humidity retard cure. **Do not apply if weather conditions will not permit complete cure before rain, dew, fog or freezing temperatures occur.** Do not apply in the late afternoon if heavy moisture condensation can appear during the night.

For specific information on safety requirements, refer to OSHA guidelines and **DIATHON BASECOAT** Material Safety Data Sheet.



Our products are guaranteed to meet established quality control standards. Information contained in our technical data is based on laboratory and field testing, but is subject to change without prior notice. No guarantees of accuracy are given or implied, nor does UNITED assume any responsibility for coverage, performance or injuries resulting from storage, handling or use of our products. Liability, if any, is limited to product replacement or, if applicable, to the terms stated within the executed project warranty.