TREMCO

APPLICATION INSTRUCTIONS

VULKEM® 4083

Part of the Vulkem® Roofing Series
Acrylic Elastomeric Roof Coating

1. PURPOSE

1.1 The purpose of this document is to establish uniform procedures for installing the Vulkem® 4083 membrane for roofing applications.

1.2 The techniques involved may require modifications to adjust to jobsite conditions. Consult your Tremco Representative for specific design requirements.

2. SCOPE

2.1 This document will provide the necessary instructions for the application of the Vulkem 4083 System to qualify for the manufacturer's warranty. Tremco recognizes that site specific conditions, weather patterns, contractor preferences and membrane detailing may require deviation or alteration from these prescribed installation procedures. When such circumstances and situations exist on a project, Tremco recommends that the local Tremco Sales Representative or Technical Services be contacted for assistance and approval as required.

3. SYSTEM COMPONENTS

- Dymonic 100
- Permafab
- TREMprime IO Primer
- Vulkem 45 SSL White
- TREMprime Fluoro Primer

4. JOBSITE PREPARATION

4.1 Cover and protect existing adjacent portions of building and building equipment from damage, discoloration, and spills from the waterproofing materials to be installed.

4.2 Mask all surfaces to be protected. Seal joints subject to infiltration by coating materials.

4.3 Limit traffic and material storage to areas of the roof that have been protected.

4.4 Maintain temporary protection and leave protection in place until all roof coating has been completed.

4.5 Ensure compliance with all environmental regulations of authorities having jurisdiction.

4.6 Limit all potential spread areas of dust and debris. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. Remove debris from building roof by chute, hoist, or other device that will convey debris to grade.

4.7 Shut down air intake equipment in the vicinity of the install in coordination with the Owner. Cover air intake louvers before proceeding with re-coating work that could affect indoor air quality or activate smoke detectors in the ductwork.

4.8 Verify that rooftop utilities and service piping affected by the install have been shut off before commencing installation.

4.9 Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecasted.

4.10 Do not permit water to enter into or under existing system components that are to remain.

4.11 On the jobsite, materials should remain on the pallet until in use, stored in a shaded and ventilated area. Materials should be covered with a light-colored reflective tarp for protection against the elements. Allow for adequate airflow through the pallets.

5. SUBSTRATE PREPARATION

5.1 Surface to be coated shall be clean, sound, and free of all contaminants which may interfere with adhesion or proper curing of the membrane.

5.2 Rust must be abraded until it no longer exhibits flaking or chalking.

5.3 If coating insulation, all wet insulation mut be removed and replaced.

5.4 Any damaged or deficent areas of the existing roofing system must be repaired with like materials, matching the existing roofing system components. All repairs and replacments must be given sufficent time to properly cure, prior to the application of the liquid-applied roofing system.

5.5 If the surface to be coated includes pre-existing coatings or sealants, compatibility and adhesion testing is required to ensure the existing materials are sound. Please contact your Tremco Representative for details regarding the testing of compatibility and adhesion. Additional substrate preperation may be required in these areas if adverse effects appear.

5.6 If the substrate to be coated is Kynar 500 or similar, conduct an adhesion test utilizing Vulkem Fluoro Primer and Vulkem 4083.

5.7 Prime all rusted metal panels (NOT Kynar 500 or similar) with TREMprime IO primer, designed specifically for use over iron-oxide, at a rate of 100-200ft^2 per gallon (8-16 wet mils).

5.8 Roof panels exhibiting holes and/or posing safety concerns must be replaced with new metal panels with a similar panel design.

5.9 Closely inspect underside of all metal panels for corrosion at endlaps, curbs and penetrations. Replace as necessary.

6. DETAIL WORK

6.1 Priming

a. Prime all rusted metal panels (NOT Kynar 500 or similar) with TREMprime IO primer, designed specifically for use over iron-oxide, at a rate of 100-200ft2 per gallon (8-16 wet mils).

b. If the metal panel finish is Kynar 500 or similar, prime all areas at a rate of 200-250 ft^2 per gallon (6-8 wet mils) with TREMprime Fluoro Prime. When TREMprime Fluoro Prime has been applied longer than 72 hours prior to application of Vulkem 4083, TREMprime Fluro-Prime will need to be reapplied. All surfaces, which have been primed, must be clean and free of dirt, grease, oil and other foreign matter, which could prevent proper adhesion of Vulkem 4083.

c. If metal panel finish is NOT Kynar 500 or similar, prime all rusted areas using TREMprime IO Primer at a rate of 100-200 ft^2/gal. (8-16 wet mils). When TREMprime IO Primer has been applied longer than 72 hours prior to application of Vulkem 4083, TREMprime IO Primer will need to be reapplied. All surfaces, which have been primed, must be clean and free of dirt, grease, oil and other foreign matter, which could prevent proper adhesion of Vulkem 4083.

6.2 Penetrations

a. The base of all roof penetrations and curbs, i.e. stacks, vents, etc., must be sealed using Vulkem 45 SSL White at the rate of 30 - 40 lineal ft./gal. in a three-course combination with Permafab. A three-course combination consists of sealer / fabric / sealer.

6.3 Seams

a. All end-lap (horizontal) and faulty side-lap (vertical) seams must be treated with Vulkem 45 SSL White back-brushed into any open seam areas. Vulkem 45 SSL White is best applied by brush. (In typical situations one (1) gallon will cover approximately 60 - 100 lineal ft./gal.at a thickness of 1/8").

b. Seams with openings greater than 1/8", reinforce Vulkem 45 SSL White with Permafab in a three-course combination. Approximate coverage for Vulkem Seam Sealer will be 30 - 40 lineal ft./gal.

c. Seams with greater than 1/4" openings must be drawn together with a self-tapping sheet metal screw and neoprene washer.

d. At all vertical seams, apply Vulkem 4083 at a rate of 1 gal./100 ft^2. (16 wet mils).

6.4 Ridge Caps

a. All seams on and around ridge cap must be sealed using Vulkem 45 SSL White and Permafab in a three-course combination. Approximate coverage for Vulkem 45 SSL White will be 30-40 lineal ft./gal.

b. All seams around ridge ventilators must be sealed using Vulkem 45 SSL White and Permafab in a three-course combination. Approximate coverage for Vulkem 45 SSL White will be 30 - 40 lineal ft./gal.

6.5 Fasteners

a. All existing fasteners must be checked and tightened.

b. Replace stripped or missing fasteners using an oversize "repair type" fastener. BUILDEX TRAXX® or TEKS®, FABCO®,FAB-LOK®, or others. Add additional fasteners, where necessary, to draw uplifted sheets together.

c. Encapsulate all fasteners with Vulkem 45 SSL White (one gallon will encapsulate approximately 150 - 200 fasteners).

6.6 Metal Components

a. Damaged fascia, gutters, vents, ridge caps, flashings, etc., must be replaced.

7. MEMBRANE APPLICATION

NOTE: For optimum results, the protective coating must be applied after the morning dew has dried and postponed if rain is imminent. All surfaces must be clean and dry.

7.1 Atmospheric conditions such as humidity, cooler temperatures, surface temperatures above 120ºF, etc. are all factors in a coating's ability to cure.

7.2 Air temperature must be 50ºF dry and rising and must be a minimum of 5ºF above the dew point. Atmospheric conditions such as humidity, cooler temperatures, surface temperatures above 120ºF, etc. are all factors in a coating's ability to cure. Air temperature must be 50ºF dry and rising and must be a minimum of 5ºF above the dew point.

7.3 Mix each container of Vulkem 4083 with a power assisted mechanical mixer before use. Mix until coating is smooth and consistent. For pails, a Jiffy Mixer attached to a low-speed power drill is recommended. Do not hand mix. DO NOT THIN.

7.4 Apply Vulkem 4083 in two coats at minimum 1 gal./100 ft^2 (16 wet mils) per coat, for a total of 32 wet mils (16 dry mils) minimum.

7.5 Allow to cure a minimum 24 hours between coats or until it can support the required foot traffic based on specific job site conditions and roof slope, etc. Environmental or site specific conditions may require variations in cure times.

7.6 The coverage rates shown are intended as minimum application requirements. The surface dictates actual coverage needed. On metal roofs with irregular panel and rib design, multiply length x width by 1.15 to calculate actual surface area to be coated.

7.7 Vulkem 4083 may be applied by brush, 1/2" nap roller or spray equipment.

7.8 Do not permit traffic on completed roof surfaces unless absolutely necessary, and only after complete cure.

7.9 Spray Equipment Recommendations

a. Pumps: Graco King 45:1, Graco Bulldog 30:1 or gas powered equivalents. Graco GH733, HydraMax 350 or GMax 7900 or other manufacturer's equivalents.

b. Hose/Pressure: 50´– 300´ length (depending on spray rig pressure). When using hoses longer than 100´ use the next larger hose ID every 50´. Every 50´ of hose will reduce the spray pressure of the rig by 10% at the gun tip. i.e., 300´ hose – 3/4" (50/100´) to 5/8" (50/100´) to 1/2" (50/100´) to 3/8" (50´). Good results are generally obtained @ 2000–3000 psi at spray tip.

c. Gun: Graco Contractor Gun, Graco Contractor FTx gun, Graco Silver Plus or equivalent. (Tip extrusions or pole guns can be used).

d. Tip Sizes:

Fan Width (in	.035	.037	.039	.041	.043	.045
10" – 10"	535	537	539	541	543	545
12" – 14"	635	637	639	641	643	645
14" – 16"	735	737	739		743	745
16" – 18"	835	837	839		843	
Flow Rate	1.60 gpm	1.80 gpm	1.96 gpm	2.17 gpm	2.37 gpm	2.58 gpm

e. Skill and experience of the spray applicator is important to the success of the coating application. Periodic checking of the film build is necessary to ensure best results.

8. CLEAN UP

8.1 As work progresses, it is essential to keep equipment in clean, working condition using Acetone, Isopropyl Alcohol, or Xylene. General clean-up with same.

8.2 At the conclusion of the project, all equipment should be cleaned and returned to its designated location. Disposal of empty, partially full, or full pails or drums should be discussed with the building owner, contractor, or engineer.

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