

Dr. Fixit Flexshield E 45/60



HIGH PERFORMANCE, 45 AND 60 MILS THICK,
NON-REINFORCED EPDM MEMBRANES

Description

Dr. Fixit Flexshield E 45/ E 60 are EPDM rubber based prefabricated membrane. It is used for waterproofing & lining of above & underground concrete structures, because it exhibit high degree of resistance to water, ozone, UV, weathering, abrasion, extreme temperatures, acids, alkalis and oxygenated solvents. EPDM is an elastomeric polymer synthesized from ethylene, propylene and a small amount of diene monomer, compounded with carbon black, processing oils and various cross-linking and stabilizing agents. As a thermoset membrane that recaptures its shape after stretching, EPDM maintains its physical properties for decades..

Specification

Meets the requirements of ASTM D 4637-96 & D412, D624, D816, D746

Areas of Application

- Large commercial roofs of concrete, wood, asbestos & metal sheets
- Terrace Gardens
- Basements, Foundations and Podium slab coverings
- Lakes / ponds / reservoirs / canal and tunnel linings
- Swimming pools / fish pond liners
- Rooftops of storage silos

Features & Benefits

- Lasts for more than 20 years
- High tensile and tear resistance
- Excellent resistance to UV and ozone
- Retains its elasticity at low temperatures and the resistant to temperature shock from - 20°C. to + 80°C.
- Good chemical resistance
- Laid quickly and easily, safe and environment friendly
- No maintenance required
- Minimal extra load on the roof
- Withstands the movement in the structure due to its higher elongation property

Characteristics that contribute to this superior overall system performance include:

- Cyclical membrane fatigue resistance
- Proven hail resistance
- Superior resistance to extreme heat
- Thermal shock durability



Method of Application

1 SURFACE PREPARATION

- Substrate needs to be sound, smooth, dry and free of sharp edges, loose or foreign materials, oil, grease and laitance, etc. Mechanical surface preparation methods are strongly suggested to ensure proper adhesion of the membrane.
- The expansion joints need to be properly attended prior to fixing of Dr. Fixit Flexshield E 45/ E 60. For further details contact Dr. Fixit.
- Before laying the sheets, mark out datum lines with chalk, etc., so that the membranes can be arranged properly and parallel with reference to the edges of roof area.
- Then first arrange to lay the membrane according to datum line from one side of the roof, and fold back to half its Length.

2 APPLICATIONS

- Apply bonding adhesive, Dr. Fixit Flexshield E 45/ E 60 Adhesive on to the clean and prepared substrate, and also, on to the back of the membrane that has been folded.
- Before applying Dr. Fixit Flexshield Bonding Adhesive, stir it in the container to achieve a uniform mix with no sediment at the bottom.
- Adhesive must be then trowel applied in a thin even coat on membrane and the substrate. An excess of adhesive will prolong the drying time.
- Care must be taken not to apply Dr. Fixit Flexshield Bonding Adhesive over an area that is to be cleaned later and overlapped to the adjacent membrane (from its underside). This is to be done also at the peripheries of the membranes or their termination (from the underside). Use a chalk line mark or a masking tape on the area to be overlapped (Splicing Area) and the ends of the membrane (for 50-70 mm) that has to remain clean.
- Let the solvent evaporate naturally until the adhesive attains a tacky condition. Drying time will defer depending upon the climatic conditions and coverage rate. Never use a hot air dryer to accelerate the process.
- In temperatures of 30 to 35°C, the drying time is approximately 5 to 10 minutes. Refer data sheet of Dr. Fixit Flexshield Bonding Adhesive for more details.
- Unfold back the first half of the Dr. Fixit Flexshield E 45/ E 60 membranes carefully to ensure that there are no wrinkles during the sticking process. The sticking process can be done with a roller. Since Dr. Fixit Flexshield E 45/ E 60 comes in a size of 20/25 m long & 1.2/3 m wide, maintaining the parallel position w.r.t to the datum lines, spread and sticking, is very important.
- Repeat the bonding procedure for other half of Dr. Fixit Flexshield E 45/ E 60 membranes. Keep repeating this procedure for every roll to complete the laying of Dr. Fixit Flexshield E 45/ E 60 for the entire area.
- An overlap of 50-70 mm along the length or as specified is a must. A masking tape must be first stuck to the laid membrane.
- Use Dr. Fixit Flexshield Secure Tape Adhesive to adhere the overlapped membrane portions. Now, from the underside, remove the masking tape. Apply 2 coats of Dr. Fixit Flexshield Secure Tape Adhesive wet on wet on the underside of the first membrane, and also on the top side of the adjacent overlapping membrane. Please note that the overlapping in case of Dr. Fixit Flexshield E 45/ E 60 applications is done by tucking it below the earlier membrane.
- Thoroughly roll on the overlapped area with a 50-70 mm wide metallic roller.

Precautions & Limitations

- The concrete or metallic substrate must be completely dry before taking up the application. If some moisture exists, it must be expelled with a blowtorch or a flame torch.



- The roofing structure needs to be stable / sound enough to support the temporary loadings.
- All surface voids greater than 5 mm wide shall be properly filled with suitable repair materials from the Dr. Fixit range.
- Use the right bonding agent for the right purpose as directed above.
- Dr. Fixit Flexshield E 45/ E 60 membranes & adhesives are combustible materials. They must be stored in a ventilated ware house far away from the fire.
- Handle the Activator with care; do not touch with bare hands and keep away from direct sunlight.
- Adhesives are flammable. Necessary precautions should to be taken during installation and storage.
- Good roofing practice always includes provisions for proper drainage for any type of roof system.

Technical Information

PHYSICAL PROPERTY	TEST METHOD	045" & .060" Standard
Tolerance on nominal thickness, %	ASTM D412	± 10
Tensile Strength, min, psi (MPa)	ASTM D412	1650 (11.3)
Elongation, Ultimate, min, %	ASTM D412	480
Tear Resistance, min, lbf/in (kN/m)	ASTM D624 (Die C)	200 (35.0)
Factory Seam Strength, min.	Modified ASTM D816	Membrane Rupture
Resistance to Heat Aging* Properties after 4 weeks @ 240° F (116 °C)	ASTM D573	
Tensile Strength, min, psi (MPa)	ASTM D412	1500 (10.3)
Elongation, Ultimate, min %	ASTM D412	225
Tear Resistance, min, lbf/in (kN/m)	ASTM D624	215 (37.6)
Linear Dimensional Change, max, %	ASTM D1204	-0.4
Ozone Resistance* Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104°F (40°C) Specimen is at 50% strain	ASTM D1149	No Cracks
Brittleness Temp., max, deg. F (deg. C)*	ASTM D746	-67 (-55)
Resistance to water Absorption* After 7 days immersion @ 158°F (70°C) Change in mass, max, %	ASTM D471	+2.0
Water Vapor Permeance* max, perm	ASTM E96 (Proc. B or BW)	.05
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, 7560 kj/m ² total radiant exposure at .70 W/m ⁵ irradiance 176°F (80°C) Black Panel Temp.	ASTM G155	No Cracks No Crazing

* Not a Quality Control Test due to the time required for the test or the complexity of the test. However, all tests are run on a statistical basis to ensure overall long-term performance of the sheeting.

* Please see Dr. Fixit Flexshield E45 and E60 Reinforced EPDM Technical Data Bulletin for reinforced EPDM properties.



Coverage

Dr. Fixit Flexshield E 45/ E 60 Membrane widths up to 6 m & 9 m and lengths of 30 m seaming for large projects are available.

The above mentioned coverage is without considering overlap and wastage. Approximately 10% should be considered in overlap & wastage.

Packing

- Dr. Fixit Flexshield E 45/ E 60 Membrane widths up to 6 m & 9 m and lengths of 30 m seaming for large projects are available in rolls

Storage

- Dr. Fixit Flexshield E 45/ E 60 membranes should be stored under covered shed in ambient temperature.
- Dr. Fixit Flexshield Adhesives should be stored under covered shed with no contact with sunlight.

Shelf Life

- Dr. Fixit Flexshield Range membranes - Life Long.
- Dr. Fixit Flexshield Adhesives - 12 months

Health & Safety Precautions

- Dr. Fixit Flexshield Adhesives Bonding adhesive is flammable. Necessary precautions to be taken during transport /storage / use
- Recommended usage / application temperature is minimum 20°C to max. 35°C for better tack and adhesion
- During application / use - dew point should not be less than 3°.

Other Products Categories available

Dr. Fixit brings you the widest range of Construction Chemicals



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