

ROOF-540™
Advanced Acrylic Fluid Applied Elastomeric Coating for Roofs

Technical Specifications

PART 1- PRODUCTS

Detail Methodology for ROOF 540

Roof 540 Specification

Providing labor, tools, equipments and removing loose old flaked paint, and washing the entire surface with a pressure of water and there after applying Roof 540 system in series of coat which will be as follows:

- 1st** Application of ‘Base Coat’ grey in color.
- 2nd**, embedding fabric mesh
- 3rd**, another 2 coats of ‘Base Coat’
- 4th** Application of ‘Top Coat’ white in color
- 5th** Another coat of ‘Top Coat’ white in color.

Detail Specification with Material Coverage.

1.0 DESCRIPTION

These specifications are for our products ROOF 540, which is used for waterproofing with thermal insulation for bare concrete surface, GI sheets, AC Sheets etc. If base concrete surface is not provided with smooth finish, IPS / plaster is to be provided and on this surface ROOF 540 can be applied. Similarly if proper slopes are not available on bare concrete surface, screed is to be provided to get gentle slope for flow of water.

1.1 MATERIALS

1. It is Advance Acrylic Elastomeric Five Coat system consisting of 1st base coat, FabMatt polyester fabric, 2nd base coat over fabric, and top/finishing coat. Primer coat is to be applied before application of this system.
2. Bio-degradable cleaner:, water-reducible non-phosphate cleaner is used for cleaning concrete substrates prior to coating.
3. Construction Grade Caulk: Single package polyurethane sealant, is used for sealing cracks and seams, and at vertical/horizontal interfaces.
4. Reinforcement fabric: [Stitch bond polyester fabric], is provided for reinforcing large areas.
5. Fluid-Applied base coat and finishing coats are to be provided for a seamless, weatherproof membrane over the existing concrete substrate.

1.2 PERFORMANCEREQUIREMENTS-FLUID- APPLIED ELASTOMERIC COATING

Fluid-applied, advance 100% acrylic elastomeric topcoat in the specified finish color shall be internally plasticized to provide a permanently flexible, weather-resistant topcoat. It shall possess a Class “A” fire rating, as tested and certified by UL 790 and FACTORY MUTUAL. Coating shall meet or exceed all properties specified in ASTM D6083, Table1, “Liquid Property Requirements”, and table 2, “Film Physical Property Requirements for Acrylic Roof Coatings”. The same are tabulated below and shall be verified by a certified independent testing agency.

1.2.1 PROPERTIES

| Parameter | Applicable code | Acceptance criteria | Value for Roof 540 |
|---|------------------------|--|-----------------------------------|
| Viscosity | (ASTM D562) | 85 to 141 KU | 101 |
| Volume solids | (ASTM D2697) | 50% | 63% |
| Weight Solids | (ASTM D1644) | 60% | 65.46% |
| Initial % Elongation | (ASTM D2370) | Max 100 % 73 F (23 C) | 135 |
| Initial Tensile Strength | (ASTM D2370) | Min 200 psi (1.38 Mpa) @ 73 F Min | 222 |
| Final % Elongation | (ASTM D2370) | Min 100% @73 F (23 c) | 161% |
| Fungi Resistance | (ASTM G21) | | Zero Rating |
| Permeance | (ASTM D1653) | Max 50 perms (17.2 x 10 - 10kg/sm2 Pa) | 13.98 |
| Water Swelling | (ASTM D471) | Max 20% (mass) | 17.05 |
| Accelerated Weather (1000 hours) | (ASTM D4798) | No Cracking or Checking | No Cracking, Checking or chalking |
| Adhesion | (ASTM C794 or D903) | Min 2.0 ph (350 N/m) | 5.7 |
| Tear Resistance | (ASTM D624) | 60lbs/in.(21 Kn/m) | 87.7 |
| Low Temp Flexibility after (100 hours) | (ASTM D522) | Minimum pass ½ inch After 1000 hours mandrel @ -15 f (-18 c) | Pass ¼ inch @ -17.7 F |

1.3 SUBSTITUTIONS

Acrylic coatings extended with styrene, vinyl or other ingredients are not allowed. Materials such as cementitious coatings, ceramic-filled coatings, asphalt modified materials, moisture-cured urethanes. Kraton-based rubbers, Hypalons and butyls are not considered acceptable for materials specified herein

ROOF 540 COATING APPLICATIONS

1. All roof preparation materials shall be allowed to dry thoroughly prior to application of the acrylic coating
- 2.Immediate prior to application of the acrylic coating system, all dust, dirt and other contaminants shall be blown off the roof surfaces to be coated, using high pressure compressed air.
- 3.Roof surface shall be primed with primer [primer is only advisable if there is a powder on the surface with roller or airless spray machine and it shall be kept for curing for at-least 8 hours]., primer shall be applied @ of 20Kg Bucket for 1200 Sft. Then base coat in grey color is applied with 20Kg Bucket of material covering 600 Sft with average (220 to 242 microns coating developing) with rolling out a small section of FABMATT [Fabric] where reinforcement begins. Embed in-capsulate the end of FAB MATT [fabric] roll so that it is anchored at that point. Rollout 4 to 10 feet (1.2 to 2.5 m) of fabric at a time and either spray apply or brush evenly over the top side at rate of 20 Kg Bucket for 500 sqft, allowing fabric to confirm to the surface. Work the base coat evenly throughout the fabric using a roller or hand so that it is totally In-capsulated, eliminating any air pockets, wrinkle or gaps. Take extra care to ensure that edge of the fabric are will saturated and adhered. Overlap consecutive passes of fabric a minimum of 2 inch (5cm) on each side. Substrate porosity and texture will determine the amount of basecoat required to in-capsulate the reinforcing fabric.

4. After Fabric is laid over it, again apply **Foam Grade Gray in color** at the rate of 20Kg Bucket for 200 sqft on over lapping
5. After allowing the basecoat to dry, apply top / finishing coat (Specified Color). At a rate of 20Kg per 600 sq ft. Use a medium-nap roller or airless spray or brush to apply elastomeric coating. Application of the top coat shall be in a perpendicular direction to the base coat.
6. Final Top Coat of any shade should be applied by Spray only so no brush marks are seen on the final surface.
7. The total –Basecoat/topcoat dry film thickness required at any location shall be 1.2 mm (1200 microns) or more. Including fabric.

Notes to be added in specifications:

1. Any Special top color will be charged extra other than White color
2. FAB Matt [Fabric Mesh] is recommended only for Base Surface [Horizontal Surfaces]
3. Parapet wall does not require FabMatt [Fabric Mesh] except top of parapet [Coping area] that also in special cases where no coping is done.
4. Removing/shifting of pipes on roofs, parapet or leakages in pipes while or before executing the work same will be repaired or replaced and its in interest of work.

3.0 CLEANUP

1. Maintain work and work areas in a clean, safe condition at all times during coating installation, Remove excess materials, trash and debris from the jobsite daily.
2. At the completion of the project, clean area of any splits and containers, and clean up all roofing debris, leaving jobsite in a clean and orderly condition.

4.0 WARRANTY

Upon completion of the roof coating system ,the coating manufacturer representative , Owner’s representative , Architect and Applicator shall make a final inspection to the determine the dry film thickness of the fluid-applied acrylic membrane and to verify that the system meets the Manufacturer’s requirements for warranty. The Contract shall notify all interested parties in advanced of said inspection.

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