SHUANGSHI
GEOSYNTHETIC PROFESSIONAL

# Technical Information Sheet

## Description

Shuangshi Reinforced EPDM is known as an extremely durable,and has superiro mechnical performance than normal ones. Shusnghi EPDM membrane is 100% recyclable and eco friendly.

## Product Preparation

1. Substrates must be clean, dry, smooth, and free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials that may damage the membrane.
2. All roughened surfaces that can damage the membrane shall be repaired as specified to offer a smooth substrate.
3. All surface voids greater than ¼" (6 mm) wide shall be properly filled with an acceptable fill material.

### Product Packaging

| Membrane Thickness | Widths | | Length | Weight |
|---|---|---|---|---|
| 0.045" (1.14 mm) | 7.5' (2.3 m)<br>10' (3.05 m)<br>16.7' (5.09 m)<br>20' (6.10 m) | 30' (9.14 m)<br>40' (12.19 m)<br>50' (15.24 m) | 100' (30.5 m) | 0.29 lb/ft² (1.4 kg/m²) |
| 0.060 " (1.52 mm) | 7.5' (2.3 m)<br>10' (3.05 m)<br>16.7' (5.09 m)<br>20' (6.10 m) | 30' (9.14 m)<br>40' (12.19 m)<br>50' (15.24 m) | 100' (30.5 m) | 0.39 lb/ft² (1.5 kg/m²) |

## Storage

Store away from sources of punctures and physical damage.

Assure that structural decking will support the loads incurred by material when stored on rooftop. The deck load limitations should be specified by the project designer.

Store away from ignition sources as membrane will burn when exposed to open flame.

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## Typical Properties (Meets or exceeds ASTM D 4637,Type I)

| Physical Test | ASTM Min. Value | Typ. Value 45 mil | Typ. Value 60 mil |
|---|---|---|---|
| Thickness (D412) | 45 mil: 1.143 mm +0.178 mm/-0.127 mm (0.045" +0.007"/-0.005")<br>60 mil: 1.52 mm +0.229 mm/-0.152 mm (0.060 ″ +0.009 ″/-0.006 ″) | 1.092 mm (0.043") | 1.37 mm (0.054 ″) |
| Tensile Strength (D412, Die C) | 9.0 MPa (1305 psi) Minimum | >9.6 MPa (1392 psi) | > 10.0 MPa (1450psi) |
| Dynamic Puncture Resistance @ 5J (D5635) | Pass | Pass | Pass |
| Static Puncture Resistance @ 20 kg (D5602) | Pass | Pass | Pass |
| Elongation, Ultimate % (D412, Die C) | 300% Minimum | 445% | 480% |
| Tensile set (D412, Method A, Die C) | 10% Maximum | Pass | Pass |
| Tear Resistance (D624, Die C) | 26.27 kN/m (150 lbf/in) Minimum | >29.25 kN/m (167 lbf/in) | >30.40kN/m (174 lbf/in) |
| Brittleness point (D2137) | -45 ºC (-49 ºF) Maximum | -45 °C (-49 °F) | -45 °C (-49 °F) |
| Ozone resistance, no cracks D1149) | Pass | Pass | Pass |
| Tensile Strength after Heat Aging* | 8.3 MPa (1205 psi) Minimum | Pass | Pass |
| Elongation, Ultimate after Heat Aging* | 200% Minimum | 300% | Pass |
| Tear Resistance after Heat Aging* | 21.9 kN/m 125 lbf/in Minimum | >28.6 kN/m (163 lbf/in) | Pass |
| Linear Dimensional Change after Heat Aging* | ± 1% | -1% | Pass |
| Water Absorption by Mass (D471) | +8%/-2% | +1% | Pass |
| Visual Inspection after Xenon-Arc Weather Resistance Exposure** | Pass | Pass | Pass |
| PRFSE, Minimum % after Xenon-Arc Weather Resistance Exposure** | 30% Minimum | 75% | Pass |
| Elongation, Ultimate, Minimum % after Xenon-Arc Weather Resistance** | 200% Minimum | 340% | Pass |

* Heat age EPDM membrane for: 166 ± 1.66 hours at 240 ± 4˚F (116 ± 2˚C), followed by specified physical testing.
** Weather Resistance shall be Practices G151 and G155 Xenon-Arc as follows:

| | |
|---|---|
| Filter Type: | Daylight |
| Irradiance: | 0.35 to 0.70 W/(m2·nm) @ 340 nm [42 to 84 W/(m2·nm) @ 300 to 400 nm] |
| Cycle: | 690 minutes ± 15 minutes light, 30 minutes light plus water spray |
| Un-insulated Black Panel Temp: | 176º ± 4ºF (80º ± 2ºC) |
| Relative Humidity: | 50% ± 5% |
| Spray Water: | De-ionized |
| Specimen Rotation: | Every 315 KJ/(m2·nm) @ 340 nm [37.8 MJ/(m2·nm) @ 300 to 400 nm] |
| Exposure: | 10,080 KJ/(m2·nm) @ 340 nm [1209.6 MJ/(m2·nm) @ 300 to 400 nm] |