SINGLE PLY

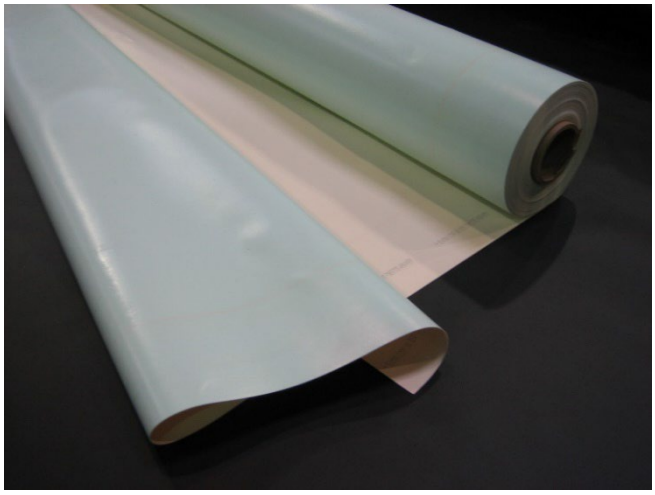
# Technical Data Sheet
## FiberTite®

MOY - an authorised FiberTite® Partner

**Product Description / Use:**

FiberTite® features a reinforced polyester knit fabric, coated with a proprietary compound, utilising ELVALOY™ Ketone Ethylene Ester (KEE) as the principle polymer in the hybrid vinyl alloy coating.

FiberTite is a nominal 0.9 mm thick membrane which not only meets or exceeds the minimum physical property requirements in EN 13956 but was used as the benchmark for the development of ASTM D6754-15 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing. It meets or exceeds the physical properties and performance characteristics of many other thicker membranes.



Carefully manufactured to allow strict control over the production process, from the selection of the yarns, to the engineering, knitting and weaving of the base fabrics, to the final coating process. Today, FiberTite Roofing Membranes are the result of over 60 years of applied fabric engineering and coating technology.

All FiberTite Roofing Membranes are constructed using high tenacity/heavy weight yarns to create a base fabric reinforcement to provide superior puncture, tensile and tear resistance properties. The base polyester fabrics are primed with a unique and proprietary adhesive coat that lays the foundation to physically bond the KEE coatings to the "fiber" to maximise seam strength and overall membrane performance.

FiberTite is coated on the face and back with an original "KEE" formulation to provide superior hot air welding characteristics, extreme UV resistance, broad chemical resistance and long-term flexibility and reparability for the installed roofing membrane system. FiberTite exhibits excellent tear, puncture, fungus, algae and flame resistance that make FiberTite Roofing Systems some of the most sustainable roofing systems available.

FiberTite membrane is manufactured in 2.54m* wide by 36.6m* long rolls. Laps in the membrane sheets are joined by fusing the thermoplastic membrane with appropriate hot air welding equipment, set at the correct welding temperature.

** Approx.*

**Certification:**

**System Fire Testing:**
Test Standard: CEN/TS 1187: 2012
Classification Standard BS EN 13501-5: 2016

Determination of external fire performance is a system test which will be influenced by the components within the roofing system.

Whilst FiberTite may be included in compliant $B_{ROOF}$ (t1, t2 and t4) systems, always check with MOY Technical Services for the very latest information on fire testing carried out.

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**Technical Specification:**

| Essential characteristics | | Performance | | Harmonised Technical Specification |
|---|---|---|---|---|
| | | FiberTite nom. 0.9mm [1] | Unit | |
| External Fire Performance | EN 13501-5 | F [2] | | EN 13956: 2012 |
| Reaction to fire | EN 13501-1 | E | | |
| Watertightness | EN 1928 | Pass | | |
| Tensile strength | EN 12311-2 | ≥ 2100 | N/50mm | |
| Elongation | EN 12311-2 | ≥ 15 | % | |
| Resistance to static loading | EN 12730 (B) | ≥ 20 | kg | |
| Resistance to impact<br>- Aluminum base<br>- EPS base | EN 12691 | <br>≥ 500<br>≥ 2000 | <br>mm<br>mm | |
| Tear resistance<br>- Warp<br>- Fill | EN 12310-2 | <br>≥ 180<br>≥ 250 | <br>N<br>N | |
| Joint peel resistance | EN 12316-2 | ≥ 115 | N/50mm | |
| Joint shear resistance | EN 12317-2 | ≥ 1500 | N/50mm | |
| Durability – UV exposure | EN 1297 | Pass | | |
| Foldability at low temperature | EN 495-5 | ≤ -20 | °C | |
| Moisture resistance factor | EN 1931 | 20,225 | μ | |
| Vapour resistance | EN 1931 | 86 | MN.s/g | |
| Water vapour diffusion – equivalent air thickness (Sd-value) | EN 1931 | 17.2 | m | |
| Dangerous substances | Note [3] | NPD | | |

| ASTM D6754-15 | Minimum Requirements | FiberTite Typical |
|---|---|---|
| Thickness, mm (in.)<br>ASTM D 751 | 0.81 (0.032) | 0.9 (0.036 nom.) [1] |
| Thickness over Fiber, mm (in)<br>Optical method (inches) | 0.18 (0.007) | 0.23 (0.009) |
| Breaking Strength, N (lbf)<br>ASTM D 751 proc. B - strip | 1499 (338) | 1557 (350) |
| Elongation at Break, %<br>ASTM D 751 - strip | 18 | 18 |
| Tear Strength, N (lbf)<br>ASTM D 751 Proc. B. Tongue Tear | 338 (76) | 445 (100) |
| Linear Dimensional Change<br>ASTM D 1204 max (%) | 1.3 | 0.63 |
| Fabric Adhesion, N/m (lbf/in)<br>ASTM D 751 | 3330 (19) | no peel |
| Retention of Properties after Heat Ageing<br>ASTM D 3045 - 176°f (80°C)/56 days<br>Breaking Strength, strip, % original<br>Elongation at Break, strip, % original | <br><br>90<br>90 | <br><br>90<br>90 |
| Low Temperature Bend after Heat Ageing °F / (°C) | -30 / (-1.1) | -30 / (-1.1) |
| Low Temperature Bend<br>ASTM D 2136 °F / (°C) | -30 / (-1.1) | -30 / (-1.1) |
| Change in Weight after Exposure in Water<br>D 471 158°F (70°C), 166 h, one side only, max. (%) | 0.0, +6.0 | 0.0, +3.7 |
| Factory Seam Strength, N (lbf)<br>ASTM D 751 Grab Method | 1955 (440) | > Fabric Break |
| Hydrostatic Resistance, Mpa (psi)<br>ASTM D751 | 4.1 (590) | 4.8 (700) |

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| | | | |
|---|---|---|---|
| Static Puncture Resistance<br>ASTM D 5602 (99 lbf) | | pass | pass |
| Dynamic Puncture Resistance (J)<br>ASTM D 5635 | | 10 | 20 |
| Accelerated Weathering<br>Practice G 155 / xenon | | 5,000hr | >10,000hr |
| cracking (7x magnification) | | none | none |
| crazing (7x magnification) | | none | none |
| Accelerated Weathering<br>Practice G 154 / UVA | | 5,000hr | >10,000hr |
| cracking (7x magnification) | | none | none |
| crazing (7x magnification) | | none | none |
| Fungi Resistance<br>Practice G 21, 28 days | Sustained Growth<br>Discoloration | no growth<br>none | no growth<br>none |
| Abrasion Test, cycles<br>D 3389 H-18 wheel / 1,000 g load | | 1,500 | 1,500 |
| **Additional Physical Properties** | | | |
| Tensile Strength (psi)<br>ASTM D882 | | 8,500 | |
| Breaking Strength (lbs)<br>ASTM D751, Grab Method | | 450 | |
| Puncture Resistance (lbs)<br>ASTM D751, Bursting Strength | | 350 | |
| Water Vapor Transmission<br>ASTM E96 proc. A (gm/m2/24hrs) | | 1.3 | |
| Shore A Hardness<br>ASTM D2240 | | 87 | |
| Flame Resistance<br>MIL-C-20696C / Type II Class 2 | | pass | |
| Oil Resistance, MIL-C 20696C<br>No swelling, cracking or leaking | | none | |
| Hydrocarbon Resistance, MIL-C-20696C<br>No swelling, cracking or leaking | | none | |
| High Temperature Dead Load<br>ASTM D751 (50 lbs, 160°F (71.1°C), 4 hrs) | | pass | |

| Energy Attributes | DC196 Off White | DC6 White | DC691 CR Gray | DC667 CR Tan |
|---|---|---|---|---|
| Solar Reflective Index (SRI)<br>ASTM E1980 | 104 | 110 | 84 | 88 |
| Solar Reflective Index (SRI) (3 yr aged)<br>ASTM E1980 | 76 | 86 | 73 | 76 |
| Initial Solar Reflectance<br>ASTM C1549 | 0.83 | 0.87 | 0.69 | 0.72 |
| Solar Reflectance (3 yr aged)<br>ASTM C1549 | 0.66 | 0.71 | 0.61 | 0.63 |
| Initial Thermal Emittance<br>ASTM C1371 | 0.85 | 0.85 | 0.89 | 0.88 |
| Thermal Emittance (3 yr aged)<br>ASTM C1371 | 0.74 | 0.84 | 0.89 | 0.89 |
| Energy Star | YES | YES | YES | YES |
| LEED v4 - Heat Island Reduction<br>SS Credit | 1 Credit | 1 Credit | 1 Credit | 1 Credit |

NOTE: Performance values above represent expected measurements at the time of manufacture.

1) Manufactured to ASTM D6754 standards.
2) In accordance with EN 13956:2012 the classification of the product in accordance with EN 13501-5 is limited to class F. Classifications of roof build-ups can be obtained separately.
3) This product is an article as defined in article 3 of EC regulation No 1907/2006 (REACH). It contains no components which are intended to be released under normal or reasonably foreseeable conditions of use. Based on current knowledge, this product does not contain substances of very high concern as listed in Annex XIV of the REACH regulation or in the "Candidate List of Substances of Very High Concern for Authorisation" published by ECHA in

concentrations above 0.1 % (w/w). A safety data sheet following Article 31 of REACH is not needed to bring the product to the market, to transport, or to use it.

**Environmental Information:**

- Conformity with LEED v4.1 SSc 5 (Option 1): Heat Island Reduction – Roof (colour dependent) meets Initial and aged requirements. Additional points available with inclusion of Moy vegetative roofs (subject to criteria).
- Conformity with LEED v4.1 SSc (Option 1 & Option 2): Rainwater Management – Points available when used in conjunction with Moy Rainwater Management Systems.
- Conformity with LEED v4.1 WE Prerequisite (Option 2): Outdoor water use Reduction – Points available when used in conjunction with Moy Rainwater Management system.
- Conformity with LEED v4.1 MRc 3 (Option 2): Building Product Disclosure and Optimization - Sourcing of Raw Materials.
- Conformity with LEED v4.1 MRc 4 (Option 1 and Option 2): Building Product Disclosure and Optimization - Material Ingredients.
- Conformity with LEED v4.1 MRc 2 (Option 1): Building Product Disclosure and Optimization - Environmental product declarations.
- Environmental Product Declaration (EPD) available to ISO 14025:2006 and ISO 21930:2017.

**Roll Dimensions:**

2.54m* x 36.6m* = 100.7kgs/roll

** Approx.*

Note: There may be up to one split roll per pallet, but this will be clearly identified on the pallet where applicable. The minimum length of a single piece contained in a split roll will be no less than 7m.

**Application:**

FiberTite Roofing Systems carry extensive FM Global and Underwriters Laboratories approvals. FiberTite can be installed by mechanically side lap fastening the membrane using appropriate MOY fasteners with membrane stress plates or using MOY thermally broken tube fasteners.

Also, in addition where specified, membrane can be adhered using the appropriate MOY membrane adhesive onto pre-approved substrates. FiberTite can also be installed in typical ballasted applications using river washed stone ballast, concrete paving slabs or green roofing.

For specific installation recommendations and requirements, please consult the most current version of the MOY Installation Guide for FiberTite Roofing Systems.

**Storage:**

FiberTite must be stored dry. At the building site, it is important that the materials are stored on pallets (raised above the ground) and covered with light coloured tarpaulin.

The FiberTite materials must be kept under shelter, in order to avoid sudden changes in temperature and potential condensation.

**Cleaning:**

Cleaning must be carried out with water and neutral soap. It is recommended to avoid contact with solvents and any abrasive materials.