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XF 114 Root Barrier (40 mil) – Product Information

Application

XF 114 is the root barrier component of the Xero Flor green roof system and protects the roof waterproofing membrane from direct contact or encroachment by plant roots. The XF 114 root barrier is optional depending on recommendations or requirements by the roof waterproofing membrane manufacturer or architect / builder. To avoid damage from wind uplift, the XF 114 should be secured during unrolling and covered immediately after installation.

Product Description

The XF 114 root barrier is a mono-layer membrane consisting of flexible, low-density polyethylene (LDPE). The material is delivered in desired widths – up to 20 ft - accordion-folded on 5 ft rolls.

Properties	Test Method	Minimum Roll Averages	Typical Roll Averages
Thickness mils (mm)	ASTM D 1593	37 (0.94)	40 (1.02)
Density lb/ft ³ (g/cm ³) (Nom. wt 200 lb / 1000 ft ²)	ASTM D792 or ASTM D1505		57.7 (.925)
Minimum Tensile Lbf/in width (N/cm width)	ASTM D638 1. Tensile strength at yield 2. % Elongation at yield 3. Tensile strength at break 4. % Elongation at break 5. Modulus @ 100% Elongation	80 (140) 13 170 (305) 650	84 (147) 13 175 (314) 700 68 (119)
Hydrostatic Resistance psi (kPa)	ASTM D751	230 (1586)	250 (1724)
Puncture Resistance Lbf (N)	FTMS 101C Method 2065	61 (271)	65 (289)
Tear Resistance Lbf (N)	ASTM D1004	24 (107)	26 (116)
Volatile Loss - Method A	ASTM 1203		<1%
Resistance to Soil Burial (% change maximum in original value)	ASTM G22 Tensile strength at yield		-4%
Low Temperature Impact Failure Temperature F (C)	ASTM D746		< -70 (< -94)
Dimensional Stability % Change	ASTM D 1204		< 2
Environmental Stress Crack Resistance Hours to Failure	ASTM D5397 Method A		> 400
Carbon Black %	ASTM D1603	2.5	2.75
WVTR g H ₂ O/100 in ² /24 hrs (g H ₂ O/m ² /24 hrs)	ASTM E96 Method A 73 °F, 50% RH		.016 (.018)
Perms Grains/ft ² /hr/in.Hg (Grams/m ² /day/mm Hg)	ASTM E96 Method A 73 °F, 50% RH		.021 (.026)