# TremPly<sup>®</sup> KEE and KEE FB Single Ply Systems

# A reinforced polyester knit fabric with a proprietary hybrid thermoplastic alloy coating

#### FEATURES

Elvaloy KEE flexibilizer

- Heavy duty reinforcement
- Full bond around fiber reinforcement
- Fleeceback and smooth versions

### BENEFITS

- Superior flexibility, UV resistance and chemical resistance
- Excellent tear strength and puncture resistance
- Maximum seam strength for long term performance
- Multiple application methods to meet project specific needs



### DESCRIPTION

TremPly® KEE and KEE FB (Fleeceback) Systems not only meet or exceed the minimum physical property requirements enumerated in ASTM D6754 Standard Specification for Ketone Ethylene Ester (KEE) based sheet roofing, but exceed the physical properties and performance characteristics of much thicker competitive products. TremPly KEE membranes are available in nominal 45 and 60 mil thickness; smooth and fleeceback versions; and in white, gray and tan which can all help an organization meet LEED requirements. All TremPly KEE Roofing Membranes are constructed using high tenacity/heavy weight yarns to create a base fabric reinforcement to impart 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 maximize seam strength and overall membrane performance. TremPly KEE is coated to provide superior hot air welding characteristics, extreme UV resistance, broad chemical resistance and long-term flexibility and repairability for the installed roofing membrane system. TremPly KEE Roofing Systems have excellent tear, puncture, fungus, algae and flame resistance, making them among the most sustainable roofing systems available.

### **BASIC USES**

TremPly KEE and KEE FB single ply roofing systems are designed to provide superior performance and exceptional value; the white, tan or gray surfaces absorb much less heat that a black roof, which can help lower a facility's energy use and improve its appearance. They are excellent choices for roof overlays, replacement and new construction alike.

APPLICATION

TremPly KEE Roofing Systems carry extensive FM Global and Underwriters Laboratories' approvals. TremPly KEE Roofing Systems can be installed by mechanically fastening or adhering the membrane bonding adhesive. TremPly KEE can also be installed in typical ballast configurations using conventional stone or paver ballast. Field seaming is accomplished by fusing the thermoplastic membrane with conventional hot air welding equipment.

STORAGE

Materials should remain on the pallet until use and be stored in a shaded, ventilated area. Materials should be covered with a light-colored, reflective tarp forprotection against the elements. Allow for adequate air flow inside the pallets.

#### APPROVED ATTACHMENT METHODS

	TREMPLY KEE	TREMPLY KEE FB
POWERply Endure BIO Adhesive	No	Yes
Tremply KEE FB Bonding Adhesive	No	Yes
Tremply KEE LV Bonding Adhesive	Yes	No
Tremply KEE WBII Bonding Adhesiv	e No	Yes
Hot Asphalt	No	Yes
TremPLY KEE Plus Stress Plates	Yes	Yes

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## DIMENSIONS/ COVERAGE RATES

THICKNESS	ROLL SIZE	COVERAGE (as applied)
45 mil (1.14 mm)	37" x 100' 50" x 100' 74" x 100' 100" x 100'	266 sq.ft. 374 sq.ft. 573 sq.ft. 789 sq.ft.
45 mil FB (1.14 mm)	72″ x 80′ 100″ x 80′	455 sq.ft. 639 sq.ft.
60 mil (1.52 mm)	37″ x 80′ 74″ x 80′	212 sq.ft. 458 sq.ft.
60 mil FB (1.52 mm)	72" x 80'	455 sq.ft.

## PHYSICAL PROPERTIES

PROPERTY	ASTM D6754	TREMPLY KEE AND KEE FB
Thickness ASTM D 751 (inches)	.032	.045/.060
Thickness over Fiber Optical method (inches)	.007	.014/.016
Breaking Strength (MD/XMD) D 751 proc. B strip (lbf/in)	337	520/406
Elongation at Break (MD/XMD) D 751 - strip	18	22/20
Tear Strength (MD/XMD) ASTM D 751 proc. B. Tongue Tear (lbf)	76	125/145
Linear Dimensional Change (MD/XMD) ASTM D 1204 max (%)	1.3	-0.6/1
Fabric Adhesion D 751 min. (Ib/in)	19	no peel
Low Temperature Bend ASTM D 2136 (0f)	-30	-45°F
Retention of Properties After Heat Aging		
Practice D 3045 - 1760f /56 days		
Breaking Strength min. ASTM D 751 proc. B. (lbf/in.)	90	90
Elongation at break ASTM D 751 proc. B.	19/18	20/20
Low Temperature Bend ASTM D 2136 (°F) ASTM D 751	-30	pass
Change in Weight after Exposure in Water	+6.0	0.7
D 471 1580f one side only, max. (%)		
Seam Strength D 751 Grab Method, min. (lbf)	440	800
Hydrostatic Resistance (psi) ASTM D751	590	>1,000
Static Puncture Resistance ASTM D 5602 (99 lbf)	pass	>155
Dynamic Impact / Puncture Resistance ASTM D 5635 min. (J)	10	35
Accelerated Weathering Practice G 155 / 15,000 h xenon		
Cracking (7x magnification)	none	none
Crazing (7x magnification)	none	none
Accelerated Weathering Practice G 154 / 15,000 h UVA		
Cracking (7x magnification)	none	none
Crazing (7x magnification)	none	none
Fungi Resistance Practice G 21, 28 days Sustained Growth	no growth	none
Abrasion D 3389 H-18 wheel 1,000 g load, (min. cycles)	1,500	>2,000

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### **ENERGY ATTRIBUTES**

PROPERTY	WHITE	GRAY	TAN
Solar Reflectance-DC6 White Initial ASTM C1549	0.87	0.69	0.72
Solar Reflectance (3 yr. Aged) ASTM C1549	0.71	0.61	0.63
Initial Thermal Emmittance ASTM C1371	0.85	0.89	0.88
Thermal Emmittance 3 yr Aged ASTM C1371	0.84	0.89	0.89
Solar Reflective Index (SRI) ASTM E1980	110	84	88
Solar Reflective Index (SRI) 3 yr aged ASTM E1980	86	73	76
LEED 2.2 Heat Island Effect (SRI> 78) SS Credit 7.2	1 credit	1 credit	1 credit

#### MAINTENANCE

PRECAUTIONS

**TECHNICAL SUPPORT** 

TREMCO

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Tremco Roofing and Building Maintenance is part of Tremco Construction Products Group. Your local Tremco Roofing sales representative can provide you with effective maintenance procedures which may vary, depending upon specific conditions. Periodic inspections, early repairs and preventative maintenance are all part of a sound roof program.

Users must read container labels and Safety Data Sheets for health and safety precautions prior to use.

Your local Tremco Roofing sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

The application information provided in this data sheet serves as general guidance. Please refer to Tremco application guides and project specific specifications or consult with your local Tremco Roofing sales representative for project specific application requirements. Refer to the Safety Data Sheet (SDS) for material precautions.

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