

KEMPEROL® AC SPEED FR

Cold Liquid-Applied PMMA Resin

PRODUCT DESCRIPTION

KEMPEROL® AC SPEED FR is a two component, quick-curing, UV-stable, Low VOC, high performance, fire-rated, cold liquid-applied Polymethyl Methacrylate (PMMA) roofing and waterproofing resin that can achieve same day application. The reinforced membrane system can be surfaced with PMMA traffic and finish coatings to achieve a desired function and appearance.

COMPOSITION & MATERIALS

A monolithic membrane is created in the field by combining the KEMPEROL® AC SPEED FR two-part, cold liquid-applied PMMA resin with KEMPEROL® Premium 120 polyester reinforcing fleece.

Work Pack includes: Component A: Colored Formulation, Component B: Catalyst Powder

USE

KEMPEROL® AC SPEED FR membrane is suitable for exterior roofing and waterproofing applications including green, white, and blue roofs, plazas, balconies, terraces, parking decks, water features and other waterproofing applications. Meets FLL guidelines for root resistance for green roof applications. The membrane achieves Class A fire rating as part of an assembly in accordance with ASTM E 108 / UL 790.

ORDERING INFORMATION

KEMPEROL® AC Speed work pack:

Item#:	Size:
338-77-005	3.19 US gal (12 L) • 15 kg
338-78-005	3.30 US gal (12.49 L) • 15 kg

Additional Catalyst Powder:

Item#:	Size:
AKZO-44-254	300 g Catalyst Powder

YIELD

PREMIUM 120 FLEECE: 60 ft² (5.6 m²) per 15 kg work pack

NOTE: All yields are approximate and may vary depending upon smoothness and absorbency of substrate.

STORAGE

Review Safety Data Sheets before handling, available online at www.kempersystem.com. Always store in cool and dry location. Do not store in direct sunlight or in temperatures below 50 °F (10 °C) or above 80 °F (27 °C). Approximate shelf life is 24 months with proper storage. For best use, 24 hours before application, the material is to be acclimated at temperatures between 65-70 °F (18-21 °C)

PRODUCT INFORMATION

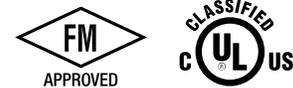
Membrane Color	White / Gray
Physical State	Cures to solid
Initial SRI (White / Gray)	108 / 27
Short-Term Temperature Resistance	250 °C / 482 °F
Application Temperature*	23 °F (-5 °C) - 95 °F (35 °C)
Usage Time**	20 minutes
Rainproof After**	35 minutes
Solid To Walk On After**	35 minutes
Apply Coating After**	60 minutes
Apply Overburden After**	60 minutes
Completely Hardened**	6 hours

* Viscosity increases with falling temperature. Component B, Catalyst Powder should be adjusted based on the catalyst powder requirements table.
** values obtained at 73°F, 50% relative humidity, may vary depending upon air flow, humidity & temperature

SUSTAINABILITY INFORMATION

% Bio-Based Material	0%
Recycled Content % (post / pre)	0/0
Manufacture Location	Germany

CODES & APPROVALS



MEMBRANE PROPERTIES

PHYSICAL PROPERTY	TEST METHOD	VALUE
Thickness (120 Fleece)	ASTM D5147	90 mils
VOC Content	Method 24	32 g/L
Peak Load @ 73 °F, avg.	ASTM D5147	>70 lbf/in
Elongation	ASTM D5147	Min 30%
Tearing Strength	ASTM D5147	65 lbf
Dimensional Stability	ASTM D1204	0.15%
Water Absorption	ASTM D570	0.1%
Impact Resistance	ASTM D2240	Shore A:75 +/- 5
Permeance	ASTM E96	0.28
Crack Spanning	Internal	2 mm/0.08 inch
Low Temperature Deflection (0 °F)	ASTM D7264 Proc. A	Pass
Combustibility Classification	D635	CC-2 ²
Self-Ignition Temperature	ASTM D1929	>650 °F
Max. Avg. Smoke Density	ASTM D2843	7

CRRC (AC FR WHITE ONLY)

	INITIAL	WEATHERED
 Solar Reflectance	0.86	0.71
Thermal Emittance	0.88	0.88
Rated Product ID Number	0950-0011	
CRRC Licensee ID Number	0950	
Classification	Liquid-Applied Roof Covering	

Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.

Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.

SURFACE PREPARATION

All surfaces must be free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, release agents, lacquers, or any other condition that would be detrimental to adhesion of the primer and membrane. This requires careful preparation of existing horizontal and vertical substrates; cracks are filled, expansion joints are prepared, flashings are removed or modified, and termination points are determined. Substrates and penetrations are prepared to rigorous industry standards, and may require scarifying, sandblasting or grinding in some cases to achieve a suitable substrate.

NOTE: Prior to opening containers, wear appropriate safety glasses and protect hands and wrists by wearing long sleeves and gloves.

PRIMING

Refer to KEMPERTEC® AC primer technical data sheet for application instructions. After substrate preparation, temporary watertightness can be achieved with the application of KEMPERTEC® AC Primer, Joint Sealant, and proper tie offs. Allow primer to cure completely prior to application of the KEMPEROL® membrane.

MIXING OF RESIN

STEP 1: Mix resin Component A with a spiral KEMPEROL® agitator, until the liquid is a uniform color, with no light or dark streaks present.

STEP 2: Add the Catalyst Powder, Component B, to resin Component A and mix with the same agitator for 2 minutes or until the powder is completely mixed throughout the liquid resin. The amount of Catalyst Powder must be adjusted according to the temperature (see table).

NOTE: KEMPEROL® AC SPEED FR is extremely fast curing. Excessive mixing time reduces the available working time for the resin.

CATALYST POWDER REQUIREMENTS			
AMBIENT TEMP °F	KEMPEROL® CAT POWDER (300G/BAG)	POT LIFE (MIN)	RAINPROOF AFTER (MIN.)
23 °F – 32 °F	600 g (2 bags)	45	90
32 °F – 40 °F	600 g (2 bags)	35	70
41 °F – 50 °F	600 g (2 bags)	30	60
51 °F – 70 °F	300 g (1 bag)	20	35
>71 °F	150 g (1/2 bag)	20	30

APPLICATION

STEP 1: After the Resin is mixed, using a KEMPEROL® roller nap or brush apply 2/3 of the resin liberally and evenly onto the surface in even stroke.

STEP 2: Roll the KEMPEROL® Fleece directly into the resin, avoiding folds, fish mouths and wrinkles. Use the roller or brush to work the resin into the fleece, from the bottom up. The appearance of the fleece should be fully saturated. Dry fleece spots are indications of unsaturated fleece or lack of adhesion. It is important to correct these areas before proceeding.

STEP 3: Apply the remaining 1/3 of the resin to the top of fleece to complete the saturation. Rolling the final coat of resin onto the fleece should result in a glossy appearance. The fleece can only hold so much resin and all excess should be rolled forward to the unsaturated portion of the fleece. The correct amount of resin will completely saturate the fleece with no dry fleece visible. Work wet membrane to avoid any blisters, openings, or lifting at corners, junctions, and transitions. Always ensure full resin saturation of fleece.

SURFACING

KEMPEROL® AC SPEED FR Membrane accepts KEMPERDUR® AC Finish in a smooth or aggregate finish for aesthetic or mechanical wear. Additionally, KEMPERDUR® AC Traffic Coating system with an aggregate finish is available for pedestrian and vehicular traffic. KEMPEROL® AC Speed FR membrane must be fully cured prior to the application of a coating.

DISPOSAL

Cured KEMPEROL® AC SPEED FR resin may be disposed of in standard landfills. This is accomplished by thoroughly mixing all components. Uncured resin is considered a hazardous material and must be handled in accordance with local, state and federal regulations. Do not throw uncured resin away.

DISCLAIMER

NO WARRANTY, EXPRESS OR IMPLIED, IS MADE IN THIS DOCUMENT. THE PRODUCT IS NOT CLAIMED TO BE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. User and certified Kemper System America, Inc. (KSA) applicators determine suitability only. See individual KSA product data sheets, SDS sheets, guide specifications and details for complete information regarding the suitability, application, and handling of KSA products.