

Technical Data Sheet

KEMPEROL® AC SPEED FR

Work pack includes:

Component A: Gray or White Resin, Component B: Catalyst Powder



Product Description

KEMPEROL® AC SPEED FR is a two component, quick-curing, UV-stable, high performance, fire-rated, cold liquid-applied Polymethylmethacrylate (PMMA) roofing and waterproofing resin that can achieve same day application.

KEMPEROL® AC SPEED FR reinforced membrane system can be surfaced with a KEMPERDUR® AC Traffic Coating and KEMPERDUR® AC FINISH to achieve 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® 120 polyester reinforcing fleece.

Use

KEMPEROL® AC SPEED FR membrane is suitable for exterior roofing and waterproofing applications including green, white, and blue roofs, plazas, balconies, terraces, park decks, and flashings. The membrane achieves Class A fire rating as part of an assembly in accordance with ASTM E 108 / UL 790.

Limitations

KEMPEROL® AC Speed FR membrane may be applied when the ambient temperature is between 23° F (-5° C) and a maximum of 95° F (35° C). The substrate temperature must be a minimum of 5 degrees above the dew point.

Note: Extra caution should be taken in below freezing temperatures. The viscosity increases with falling temperature. Ensure sufficient positive airflow over freshly applied AC Speed FR material during entire curing period to facilitate complete cure.

Yield

KEMPEROL® 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

Always store in cool and dry location. Do not store in direct sunlight or in a temperature below 50°F (10°C) or above 80°F (27°C). Approximate shelf life 18 months with proper storage.

Catalyst Powder must be stored separately. For best use, 24 hours before application, the material is to be acclimated at temperatures between 65-70 °F (18-21 °C).

Precautions

Review Safety Data Sheets before handling, available online at www.kempersystem.net.


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.

Priming

After substrate preparation, temporary watertightness can be achieved with the application of KEMPERTEC® AC Primer and Joint Sealant, and proper tie offs. KEMPERTEC® AC Primer may be brushed or rolled onto any clean and prepared surface. Allow primer to cure completely prior to application of the KEMPEROL® membrane.

Sustainability Information	
Bio-Based Material	0%
Recycled content % (post / pre)	0 / 0
Manufacture location	Germany

		Initial	Weathered
	Solar Reflectance	0.86	0.71
	Thermal Emittance	0.88	0.88
	Rated Product ID Number	0950-0011	
	CRRC Lincensee ID Number	0950	
	Classification	Production Line	
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.			

CRRC Product Rating for KEMPEROL® AC Speed FR - White

Mixing of Resin

Note: Prior to opening the containers of KEMPEROL® AC SPEED FR, wear appropriate safety glasses and protect hands and wrists by wearing gloves.

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.

Application

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

Step 2: Roll the KEMPEROL® Fleece directly into the resin, making sure the SMOOTH SIDE IS FACING UP (natural unrolling procedure), avoiding folds and wrinkles. Use the roller or brush to work the resin into the fleece, saturating from the bottom up.

Step 3: Apply the remaining 1/2 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 and no dry spots should be visible. Work wet membrane to avoid any blisters, openings, or lifting at corners, junctions, and transitions. Always assure 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.

Membrane Properties		
Physical Property	Test Method	Value
Color		White or Gray
Physical State		Cures to Solid
Initial SRI (White / Gray)		108 / 27
Thickness (120 Fleece)		90 mils
VOC Content		32 g/l
Peak Load @ 73 F, avg.	D5147	70 lbf/in
Elongation	D5147	Min 30%
Tearing Strength	D5147	80 lbf
Dimensional Stability	D1204	0.05%
Water Absorption	D570	0.05% (7 days)
Impact Resistance	D2240	Shore A:75 +/- 5
Permeance	E96	0.28
Crack Spanning		2 mm/0.08 inch
Low Temperature Deflection	D7264	Pass
Combustibility Classification	D635	CC-2 ²
Self-Ignition Temperature	D1929	>650°F
Max. ave. Smoke Density	D2843	7
Short-Term Temperature Resistance		250°C / 482°F
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

* values obtained at 73°F, 50% relative humidity, may vary depending upon air flow, humidity and temperature.

Catalyst Powder Requirements			
Material Temp °F	KEMPEROL® Cat Powder (300g/bag)	Pot Life (min)	Rainproof After (min.)
23°F - 35°F	2 bags	45	90
35°F - 50°F	2 bags	35	70
50°F - 70°F	1 1/2 bags	30	40
70°F - 80°F	1 bag	20	35
>80°F	1/2 bag	20	30

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Disposal

Cured KEMPEROL® AC Speed FR 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.

Ordering Information

KEMPEROL® AC SPEED FR Work pack:

Item #:	Size:
338-77-005	3.22 US GAL (12.19L) • 15 kg White Resin (includes 300 g Catalyst Powder)
338-78-005	3.22 US GAL (12.19L) • 15 kg Gray Resin (includes 300 g Catalyst Powder)

Additional Catalyst Powder:

AKZO-44-254	300 g Catalyst Powder
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