

Product Information

KEMPEROL® BR

Work pack includes:

Component A: Black Formulation, Component B: White Formulation, Component C: Catalyst Powder

Product Description	KEMPEROL® BR is a three-component including catalyst, high performance seamless and self-terminating cold-liquid applied, reinforced unsaturated polyester membrane system for exterior applications.
Composition & Materials	A monolithic membrane is created in the field by combining the KEMPEROL® BR 2-part, cold-applied liquid polyester resin and catalyst powder with KEMPEROL® polyester reinforcing fleece. Membrane may be applied using standard fleece available in 4, 8, 10, 13, 20, 27, and 41-inch nominal widths.
Use	KEMPEROL® BR membranes are suitable for a wide range of exterior waterproofing applications, including insulated roof assemblies, inverted roof assemblies, green roofs, plazas and beneath hot asphalt pavement.
Limitations	<p>KEMPEROL® BR may be applied only when the ambient temperature is 35 °F (2 °C) and rising, and the substrate temperature is a minimum of 5 °F above the dew point. The maximum application temperature is approximately 105 °F (40 °C).</p> <p>Without additional protection, KEMPEROL® is not resistant to hydrocarbon solvents or alkalines greater than pH 10, which should be removed from the membrane immediately.</p>
Yield	<p>Using 165 Fleece: 64 s.f. (5.9 m²) per 20kg work pack / 160 s.f. (14.8 m²) per 50kg work pack Using 200 Fleece: 56 s.f. (5.2 m²) per 20kg work pack / 140 s.f. (13.0 m²) per 50kg work pack</p> <p>Note: All yields are approximate and may vary depending upon smoothness and absorbency of substrate.</p>
Storage	<p>Always store in cool and dry location. Do not store in direct sunlight or in temperatures below 35 °F (1.7 °C) or above 80 °F (27 °C). Approximate shelf life 12 months with proper storage. Catalyst Powder must be stored separately.</p> <p>For best use, 24 hours before application, the material is to be acclimated at temperatures between 65-70 °F (18-21 °C).</p>
Precautions	Refer to KEMPEROL® Material Safety Data Sheet (MSDS) before using or handling.
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 is quickly achieved with the application of KEMPERTEC® D Primer or EP Primer and temporary joint filler. Alternatively, the use of quick-dry KEMPERTEC® AC Primer, R Primer, or EP5 Primer may allow same-day membrane application.

KEMPERTEC® primer may be brushed or rolled onto any clean and prepared surface. Allow primer to cure completely prior to application of the KEMPEROL® membrane.

Component Properties

Property	Catalyst Powder	Component A	Component B
Color	White	Black	White
Physical state	Granular	Liquid	Liquid
Specific density	0.55	1.16	1.16
Viscosity	-	4000	4000
Flash point	-	>32 °C/90 °F	>32 °C/90 °F

Membrane Properties

Physical Property	Test Method	Typical Values
Color	-	Amber
Physical state	-	Cures to solid
Thickness (165 fleece)	ASTM D751	70 mils/80 mils
VOC content	-	42 g/l
Tensile strength @ break	ASTM D751	90 lb/in
Elongation	ASTM D751 B	55%
Tearing resistance	ASTM D751 Elmendorf	8.6 lbs
Puncture resistance	FTMS 101-2031	150 lbf
Dimensional stability	ASTM D1204 6hrs@158°F	0.1%
Water absorption	ASTM D471 72hrs@158°F	2.0%
Impact resistance	ASTM D2240	Shore A:78
Water vapor transmission	ASTM E96	0.27 Perms
Usage time*	-	15 minutes
Water resistant after*	-	30 minutes
Solid to walk on after*	-	6 hours
Can be driven on after*	-	24 hours
Apply overburden after*	-	2-3 days
Completely hardened*	-	3 days
Crack spanning	-	2mm/0.08 inch
Short-term temperature resistance	-	250 °C / 482 °F

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

Mixing of Resin

Note: Prior to opening the containers of KEMPEROL® BR Resin, wear appropriate safety glasses and protect hands and wrists by wearing gauntlet-type neoprene gloves.

Step 1: Mix resin Component A (black formulation) with a spiral KEMPEROL® agitator, until the liquid is a uniform black color.

Step 2: Add the Catalyst Powder to resin Component A and mix with the same agitator for 5 minutes or until the powder is completely mixed. The dissolving time is 20 minutes to 2 hours, depending on the ambient temperature. The catalyst is completely dissolved when there are no white specks remaining.

Step 3: Mix resin Component B with a separate spiral agitator until the color is a uniform white. If the ambient temperature is below 50 °F (10 °C) or above 75 °F (24 °C), then a weather related additive should be combined and mixed into the Component B.

KEMPEROL® UP-A Cold Activator should be added to resin Component B when the ambient temperature is below 50 °F (10 °C). The activator should be mixed with the spiral agitator for 5 minutes or until both liquids are thoroughly blended.

KEMPEROL® UP-I Inhibitor should be added to resin Component B when the temperature exceeds 75 °F (24 °C). The mixing instructions are the same as the cold activator.

Step 4: Pour resin Component A and Component B into a third clean bucket at a 1:1 ratio (equal parts) and thoroughly mix the components with a clean spiral agitator. The Resin solution should be a uniform color, with no light or dark streaks present.

NOTE: Mix only that amount of resin Components A & B that can be used in 15 minutes.

Application (165 Fleece)

Step 1: After the Resin is mixed, evenly roll or brush apply 2/3 of the resin on to the surface.

Step 2: Then roll the KEMPEROL® Fleece directly into the Resin, avoiding any folds and wrinkles. Use the roller to work the resin into the fleece, saturating from the bottom up. The appearance of the fleece should be a light opaque amber with no white spots. White spots are indications of unsaturated fleece or lack of adhesion. It is important to correct these faults before the resin cures.

Step 3: Add the the remaining 1/3 of the resin to the top of the fleece and complete the saturation. Roll this final coating into the fleece, which will result in a glossy appearance. The fleece can only hold so much resin and all excess should be rolled forward to the unsaturated fleece. Any excess resin left on the top of the fleece will weather and peel off. The correct amount of Resin will completely saturate the Fleece and no white color will be visible.

Overburden

KEMPEROL® BR membrane must receive an alkalinity barrier before an application of a concrete overburden. The membrane must be allowed to fully cure, typically 2-3 days, prior to application of alkalinity protection, consisting of Kempertec EP, EP5, or AC primers with Kiln-dried silica sand.. The surface of the membrane must first be prepared by means of pressure washing with a heavy duty, PH-neutral professional grade cleaner, scrubbing, and thoroughly rinsing to remove the paraffin film developed during the curing process and any other contaminants.

Disposal

Cured BR resin may be disposed of in standard landfills. This is accomplished by thoroughly mixing all components. Note: Uncured BR resin is considered a hazardous material and must be handled as such, in accordance with local, state and federal regulations. Do not throw uncured resin away.

Ordering Information

50 Kg Workpack (Component A+B+C) Item # 202-77-255

Item#:	Size:
Component A - Black Formulation 202-77-251	23.4Kg / 5.38 US GAL (20.36L)
Component B - White Formulation 202-77-252	25.0Kg / 5.64 US GAL (21.35L)
Component C - Catalyst Powder AKZO-77-253	1,600 g bag

20 Kg Workpack (Component A+B+C) Item # 202-77-105

Component A - Black Formulation 202-77-101	9.4Kg / 2.16 US GAL (8.18L)
Component B - White Formulation 202-77-102	10.0Kg / 2.26 US GAL (8.56L)
Component C - Catalyst Powder AKZO-77-252	600 g bag