

KEMPEROL® 1K AQUA

Hybrid Elastomeric Coating

PRODUCT DESCRIPTION

KEMPEROL® 1K AQUA is a single-component, UV-resistant, light-stable, low-odor, low-solvent, low VOC, ponding water resistant, cold liquid-applied white roofing resin. KEMPEROL® 1K AQUA is used as a maintenance roof coating over existing roofs or a fully reinforced coating with the KEMPEROL® 90 polyester fleece. KEMPEROL® 1K AQUA complies with ASTM D6083, type I.

COMPOSITION & MATERIALS

KEMPEROL® 1K AQUA is a single-component water-based hybrid elastomeric polymer with a highly reflective white finish, achieving an SRI value of 110.

USE

KEMPEROL® 1K AQUA is a cost-effective roof maintenance coating that can help extend the life expectancy of an existing roof system. The coating may be used over existing metal roofs, single-ply, modified bitumen (smooth and granular), and other approved surfaces. KEMPEROL® 1K AQUA was developed for use in warmer temperatures and climates.

ORDERING INFORMATION

KEMPEROL® 1K AQUA:

Item#:	Size:
330-47-115	5 US GAL / 18.9 KG (18.9 L)
330-47-116	55 US GAL / 208.2 KG (208.2 L)

YIELD

Coating: 40 ft² / GAL (2.5 GAL/100 ft²)

KEMPEROL® 90 Fleece: 30 to 38 ft² per GAL

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 12 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). **KEEP FROM FREEZING.**

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. This requires careful preparation of existing horizontal and vertical substrates; cracks are

PRODUCT INFORMATION

Color	White
Physical State	cures to solid
Application Temperature	50 °F (10 °C) - 104 °F (40 °C).
Application Humidity	< 75%
Application Substrate Temperature	5 °F above dew point
Solar Reflectance	0.84
Thermal Emittance	0.89
SRI (Initial / 3 Year Aged)	110 / TBD
Usage Time*	30 minutes
Water Resistant After*	2 - 4 hours
Solid To Walk On After*	2 - 4 hours
Can Be Re-Coated After*	2 - 4 hours
Completely Hardened*	48 hours

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

SUSTAINABILITY INFORMATION

% Bio-based Material	0%
Recycled content % (post / pre)	0 / 0
Manufacture location	OHIO

COATING PROPERTIES (UNREINFORCED)

PHYSICAL PROPERTY	TEST METHOD	VALUE
VOC Content	Method 24	3 g / L
Volume Solids	ASTM D2697	51%
Weight Solids	ASTM D1644 Method A	65%
Viscosity	ASTM D2196 Method A	30,000 mPas
Thickness	ASTM D6083	20 mils DFT
Initial Elongation	ASTM D6083	220%
Tensile Strength	ASTM D6083	300 psi
FINAL Elongation, 1000h	ASTM D6083	400%
Tearing Strength	D624	94 lbf / in.
Water Swelling	ASTM D6083 / D471	8%
Water Vapor Transmission	ASTM D1653 Method B Cond. A	30 perms
Low Temp Flex	ASTM D522 Method B	PASS
Accelerated Weathering	ASTM D4798	PASS
Fungi Resistance	ASTM G21	No Growth

COATING PROPERTIES (REINFORCED)

Thickness	ASTM D5147	40 mils
Elongation	ASTM D5147	> 40%
Tearing Strength	ASTM D5147	50 lbf
Water Absorption (48 Hours)	ASTM D570	7%
Peak Load @ 73 °F	ASTM D5147	40 lbf
Impact Resistance	ASTM D2240	Shore A: 63

filled, expansion joints are prepared, flashings are modified, termination points are determined, and any blistered sections to be repaired and replaced in kind. KEMPEROL® 1K AQUA is not intended for submerged applications. It is important to properly address any field condition that create standing water beyond seven days.

PRIMING

After surface preparation, please refer to the Kemper System Substrate Primer Selection Table, found in the Technical Manual.

NOTE: *Prior to opening the containers of KEMPEROL® 1K AQUA, wear appropriate safety glasses and protect hands and wrists by wearing gauntlet-type neoprene gloves.*

MIXING OF RESIN

Mix resin with a spiral agitator until the liquid is a uniform white color.

APPLICATION (SPRAY COATING)

Using airless spray equipment, recommended air pressure of 2,700 to 3,000 psi at the tip and must be able to handle high viscosity liquids. Tip size of 0.019 – 0.023 and hose size 3/8". Coating to be applied in two coats, each coat to be 20 wet mils. The product has excellent suspension and requires minimal mixing. Reinforcement fleece should be used when coating over heavily alligatored surfaces and surface irregularities. For unreinforced application, fleece must be used at seams, laps, joints, penetrations, and details. DO NOT THIN.

APPLICATION (ROLLER)

Roller-apply KEMPEROL® 1K AQUA over a clean and prepared surface. Coating to be applied in two coats, each coat to be 20 wet mils. Do not press hard when using a roller as that will contribute to roller marks. Ensure to lap each preceding path to erase squeeze out from the edge of roller. Always maintain a wet edge.

APPLICATION (90 FLEECE)

STEP 1: After the resin is mixed, apply the resin liberally and evenly onto the surface, covering one working area at a time, between 10 – 15 ft².

STEP 2: Roll the KEMPEROL® 90 Fleece directly into the resin (natural unrolling procedure), avoiding folds and wrinkles. Use the roller or brush to work the resin into the fleece, saturating from the bottom up. The appearance of the fleece should be saturated with no dry spots. Dry spots are indications of unsaturated fleece. It is important to correct these areas before proceeding.

STEP 3: Apply an additional coat of resin to the top of fleece to complete the saturation. Rolling the final coat of resin onto the fleece should result in a wet and saturated appearance. All excess resin should be rolled forward to the unsaturated portion of the fleece. Work wet membrane to avoid any blisters, openings, or lifting at corners, junctions, and transitions.

DISPOSAL

Cured KEMPEROL® 1K AQUA resin may be disposed of in standard landfills.

NOTE: *Uncured KEMPEROL® 1K AQUA resin 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 MERCHANTABLE 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.