

KUT DURACOAT 1000 R

Elastomeric Polyurethane Based Membrane

PPC-29-1112



DESCRIPTION

KUT DURACOAT 1000 R is a Bitumen based liquid applied polyurethane coating that cures in hours to form a tough elastomeric membrane that adheres to most substrates, forming a chemical and abrasion resistant barrier for waterproofing, corrosion protection, and containment of water and most aqueous chemicals.

ADVANTAGES

KUT DURACOAT 1000 R remains flexible and resilient and provides exceptional service in a broad range of applications.

- Forms a tough elastomeric membrane able to bridge cracks and joints.
- Impervious to water and most aqueous chemicals, providing a long lasting tank and pond liner.
- Asphalt extended urethane formula provides superior wear and weather ability for parking decks and containment areas.
- Adheres to and bridges between common construction materials such as concrete, steel and other metals, asphalt pavement, glass, wood, and most coatings.
- Environmentally sound, complying with the toughest VOC regulations.
- Can be repaired when damaged.
- Excellent abrasion resistance for severe wear applications.
- UV stable.
- Liquid, two-component urethane can be applied to complex shapes, multiple penetrations or to most geotextiles.

TYPICAL PROPERTIES

Abrasion Resistance-Wt. Loss Taber Abraser CS-17 Wheel 1000 gm./1000 rev.	ASTM D 4060	1.2 mg. Loss
Adhesion to concrete (dry) Elcometer		24.5 kg./cm ²
Deflection Temperature	ASTM D 648	Below -51°C
Density (Approx.)	Premix	1.060 lg./ltr.
	Activator	1.21 kg./ltr.
	Mixed & Cured	1.075 kg./ltr.

Elastomeric Waterproofing	ASTM C 836 ASTM C 957	Exceeds all Criteria Exceeds all Criteria
Extension to break (min.)	ASTM D 412	400%
Hardness Shore A (min.)	ASTM D 2240 @ 25°C	60
Jet Fuel Resistance	FS SS-S-200D	Pass for Joints
Membrane performance crack bridging	10 cycles @ -25°C	> 1/8"
After heat aging		> 1/4"
Membrane weight	60 mil wet film thickness	1.51 kg/m ²
Mix Ratio	Weight Volume	7:1 9:1
Permeability to water vapour	ASTM E 96 M method E, 100°F, 100 mil sheet	0.03 perms
Recovery from 100% extension	After 5 mins. After 24 hrs.	98% 100%
Salt spray	ASTM B 117	Pass 2000 hrs.
Service temperature		-51°C to 104°C
Softening point, ring & ball	ASTM D 36	> 160.5°C
Tear strength	ASTM D 624 (Die C)	151 lbs./inch (27 kg/cm)
Tensile strength (min.)	ASTM D 412, 100 mil sheet	6 N/mm ²
Weathering	ASTM D 822	Pass 5000 hrs.

VOC 92 g/l (0.76 lb./gal.). **KUT DURACOAT 1000 R** complies with the toughest VOC regulations.

CHEMICAL RESISTANCE:

KUT DURACOAT 1000 R is resistant to a broad range of acids and alkalis. Consult **ASPEC** – Technical Department for additional information regarding chemical resistance.

STANDARDS

KUT DURACOAT 1000 R is approved by NSF International USA according to standard NSF 61 for contact with potable water. Please refer NSF official listing for further details.



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APPLICATION

SURFACE PREPARATIONS: All substrates must be clean and dry with no oils, grease or loose debris. Perform adhesion tests to confirm adequacy of surface preparation.

CONCRETE: Prepare concrete as per ASTM D-4258 and ASTM D-4259 to a surface profile of exposed aggregates. Concrete must exhibit minimum 250 kg/cm² compressive strength and be free of release agents and curing compounds. The substrate must be clean and dry (less than 5% moisture), and free of contaminants.

STEEL: Minimum 3 mil profile.

Immersion service – SSPC-SP10 / NACE No. 2 Near White Blast.

Non-Immersion service – SSPC-SP6 / NACE No. 3 Commercial Blast.

OTHER METALS: SSPC-SP1 solvent clean and abrasive blast to roughen and de-gloss the surface.

WOOD: Substrate must be clean, dry and free of surface contamination.

APPLICATION TEMPERATURE: Surface should be at least 10°C and maximum 30°C and must be 3°C above the dew point. DO NOT APPLY WHEN THE SUBSTRATE OR AMBIENT TEMPERATURE IS RISING OR COATING IS IN DIRECT SUNLIGHT. **KUT DURACOAT 1000 R** should be at least 15°C and maximum 25°C when mixed and applied. At higher temperature material may set quickly and may not be applicable.

EQUIPMENT: Use squeegee, and trowel may also be used.

POT LIFE: About 30 minutes. Working time depends on temperature and method of application. Spray application will be significantly shorter.

PRIMING: Generally not required, but may be recommended depending upon surface and exposure conditions. For more information consult ASPEC Technical Department.

MIXING: DO NOT THIN. DO NOT HAND MIX. Begin mixing each pack of base using an electric drill. Do not draw air into the mix. While mixing, slowly add the hardener component in to the base component. Once the hardener has been added, mix thoroughly for 3 FULL MINUTES. Do not mix in parts.

The induction time of 5 minutes is advisable at 20°C to 30°C ambient temperature, although it is not mandatory.

Note: For NSF 61 induction time is Mandatory.

APPLICATION: Apply **KUT DURACOAT 1000 R** directly to a clean and dry substrate. Vertical surfaces will require more than one coat.

RECOATING: **KUT DURACOAT 1000 R** may be recoated in 3 hour @ 25°C and must be recoated soon after the coating no longer comes off on polyethylene (typically within 5 hours of mixing). If the membrane has cured longer than this time, the surface must be severely abraded using surface grinder or other mechanical means, and be free of dust and debris. For immersion conditions, all coats shall be applied within 4 hours of each other, except at joint lines.

SPREAD RATE: Coverage's are theoretical and do not

account for waste, spillage, irregular surfaces, or application technique.

CURING TIME: **KUT DURACOAT 1000 R** may be placed in service within 48 hours for non-aggressive service.

For immersion service **KUT DURACOAT 1000 R** may be placed into service after 72 hours at 15°C. For severe service and potable water applications will require a cure time of 7 days @ 25°C.

CLEANING: Use mineral spirits for clean-up of uncured material. Spray equipment must be flushed regularly during application to prevent material from setting up in the hose and pump. Cured material is very difficult to remove. Soaking in solvent will soften the material and may assist in its removal.

COLOR: **KUT DURACOAT 1000 R** is initially shiny black, turning dull over 3 to 6 months when exposed to direct sunlight. For a colored or reflecting surface finish, recoat the **KUT DURACOAT 1000 R** and immediately broadcast white or colored aggregate into the coating.

COATING THICKNESS: Recommended minimum thickness at all points of the coating is 1.5 mm (60 mil) for wet film. Maximum dry film thickness recommended in 3 – 4 coats is 4 mm (160 mil). Higher thicknesses may be specified, but extended time is required to insure proper solvent release prior to placing the membrane in service.

COVERAGE:

KUT DURACOAT 1000 R - 1m²/litre @1mm wft

PACKAGING: **KUT DURACOAT 1000 R** is available in 5 litre & 20 litre packing. Each unit consists One base & One hardener. Quantities have been premeasured to provide the proper mixing ratio, leaving sufficient room in the premix container to facilitate adequate mixing. Do not estimate proportions.

STORAGE: Minimum 1 year kept in dry storage in original sealed containers at between 5°C to 27°C.

PRECAUTIONS

Avoid contamination with water or moisture. Keep all containers tightly closed until ready for use. All equipment, air supplies, and application substrates **must be ABSOLUTELY DRY**. Do not apply in wet weather or when rain is imminent or when the **KUT DURACOAT 1000 R** or the substrate may become wet within 4 hours after coating. Use caution when applying **KUT DURACOAT 1000 R** in confined spaces.

HEALTH AND SAFETY

This product contains petroleum asphalt, petroleum distillates, amine compounds and/or other chemical ingredients. Adequate health and safety precautions should be observed during the storage, handling, application and curing. Refer to Material Safety Data Sheets for further details regarding the safe use of this product.

WARNING: Flammable. Use only in well ventilated areas. Do not store or use near open flame, sparks or hot surfaces. Keep tightly closed. Avoid contact with moisture or water. Keep out of reach of children.

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