KEMSEAL PU Polyurethane Membrane Coating

DESCRIPTION:
Kemseal PU is a fluid applied single component elastomeric polyurethane membrane coating that cures to provide a tough, highly elastic seamless waterproof membrane layer. It is used to waterproof building surfaces and extend the life of existing roofing membranes. It is used to repair splits and defects in roofs. Kemseal PU is self-levelling and provides a highly elastic UV stable surface to protect aged roofing membranes. Kemseal PU is manufactured using advanced polyurethane technology to provide superior protection. It may be covered with roof gravel, left exposed, or top-coated with ‘Kemseal S-80’ Silicone for ultimate ponding water and UV resistance.

USE AREAS:
Kemseal PU is designed as a tough elastomeric membrane coating to seal and repair existing roofs and permanently protect against leaks, and as a self levelling sealer over tar and gravel roof surfaces. It can also be applied to most aged roofing surfaces such as Granulated Modified Bitumen, Single-Ply (EPDM, PVC and TPO) BUR, Metal Roofs, and Spray Foam insulation. It is an excellent alternative to most costly tear-off and re-roofing options. It can also be used as waterproofing for new building on concrete or plywood roof substrates, and primed ice and water shield base-sheet. In exposed applications it is typically coated with Kemseal S-80 white to provide heat reflective ‘cool roofing’.

GENERAL:
COLOR: Standard; Grey/White.
WEATHERABILITY: UV resistant. May be top-coat with Kemseal S-80 Silicone roof coating.
TOXICITY: Not for use in contact with edible substances or potable water.
ADHESION: Bonds to suitably prepared and primed surfaces such as aged asphalt, aged EPDM, aged cap sheet, composite, concrete, fiberglass, metal, modified bitumen, and most existing coatings on flat or sloped roofs.
ELONGATION: 600% ± 10%
TEAR RESISTANCE: ASTM D1624 Die C lbs/inch 32 pli (5.7 kgf/cm)
HARDNESS: ASTM D676 50 Shore A

COVERAGE: Un-reinforced Application: 1.35 Gal/100 sq.ft (1.8 Sq. Meters/L or 0.55ltr/sq.m.) per coat on smooth surface roofing substrate. Coverage rate will decrease on textured surfaces, and more coating will be used on first coat than on additional coats. Tar and gravel roofs will use approximately 5 gal/100sq.ft depending on amount of embedded gravel and texture. Existing smooth surface roofs can be completed in 2 coats at 22 min. DFT with Kemseal S-80 as the top coat. Reinforced/Detail Application to be at 2.8gal/1000sq.ft (1.13ltr/sq.m) to achieve min 45 mil DFT.

SHELF LIFE: 12 months from date of manufacture stored at 70 degrees F in a cool dry place.

SURFACE PREPARATION:
All surfaces shall be sound, fastened as per manufacturers’ directions, clean, dry and free of corrosion, oils and other contamination. Waterblast, wire brush/sandblast roof surfaces as necessary to remove all contaminates and weathered substrate. Prime/seal asphalt, EPDM, concrete and single ply roofing with Kemseal WBE water based epoxy primer applied as per data sheet- this also acts to resist bleed-through over asphalt surfaces. Varying substrates may require alternate products or treatments. Check adhesion by applying a test area.
DETAIL:
Detail requirements will vary depending on specific site and substrate conditions. Typically, a liberal application of Kemseal PU mastic grade sealant and/or a detail coat of Kemseal PU Coating at 40 mil thickness, reinforced with polyester fabric embedded into wet base coat and centred over joint should be applied where movement between- or within- surfaces is expected such as at fasteners, joins, laps, cracks, terminations, penetrations and internal/external corner angles or splits etc. Heavier application, additional reinforcements and/or bond breaker tapes should be used where and as required to ensure applied system will accommodate any specific movement within the installation. Blisters in existing roofing systems should be cut out and prepared, followed by a heavy fabric reinforced application of Kemseal PU to completely seal the area.

APPLICATION:

MIXING: Mix before application to assure uniform color and consistency. Product should not be thinned. A minimum of 1 or 2 coats are required applied at 1.35 gal/100sq. ft. (0.55ltr/sq.m) with a minimum DFT of 22mils over existing roofing substrates or 2.8gal/100sq.ft (1.13ltr/sq.m) 45mils DFT over other substrates such as concrete or plywood. Apply by brush, roller or spray. Allow the first coat to dry for 6 to 12 hours prior to re-application. Use a ½” nap roller cover- dip roller directly into pail and apply, or pour product onto flat roof surface and roll out evenly, or -spread with an 1/8” notched squeegee then immediately back roll for a smooth, even finish. Alternatively, apply with airless sprayer sprayed evenly to achieve consistent coverage. Textured surfaces may require additional coat/s to achieve a final minimum 22 mil dry film build. With Tar and gravel built up roofs, embedded gravel should generally be encapsulated and not protrude more than ¼”above Kemseal PU flood coat.

PRECAUTIONS: DO NOT APPLY THICKER THAN 32mils (0.8mm) PER COAT. Do not apply in temperatures below 50°F, above 100°F or if rain is expected within 2 hours. Do not use this product in a situation that exceeds its physical limits. Do not walk on Kemseal PU other than for periodic maintenance; for areas of light foot traffic, create a walking path by applying an additional coat reinforced with polyester Tie-tex cloth, or rubber granules.

DRY TIME: Allow the first coat of Kemseal PU to dry for 6 to 12 hours. Re-coat as soon as the first coat can be walked on without causing damage, and no more than 48hrs. NOTE: drying time depends on weather conditions such as temperature, humidity and air movement.

CLEAN UP: Application tools and equipment can be cleaned with xylene before cure. Once a container of Kemseal-PU is opened, the curing process will start. Use the entire contents of an opened container if possible. Unused product in an open pail will begin to cure from the top down. This can be cut out with a knife and uncured portion can be used.

MAINTENANCE: Roof structures may settle over time. A periodic inspection of your roof, which includes transition areas, flashing, vents and skylights, is recommended. Keep drains cleared at all times. Roofs become slippery when wet- use extreme caution. Kemseal PU/S-80 may be re-coated periodically after thorough cleaning as necessary to achieve adhesion.

CAUTION: For specific Health and Safety information please refer to the Material Safety Data Sheet.

California Proposition 65 Warning: This product may contain chemicals known to the State of California to cause cancer, birth defects and/or reproductive harm.

DISCLAIMER: The information contained in this technical bulletin is as up to date and correct in detail as possible and is intended to give a fair description of the product and its capabilities based on actual service history. In practice, the substrate and environmental conditions vary widely, making it essential for the user to determine the product's suitability for a particular application and that the product is not used beyond its physical limitations. As the use of this material is beyond the manufacturers' control, no guarantee expressed or implied is made as to such. Liability is limited to replacement of material proved faulty. Kemforte Systems terms and conditions of sale apply. The user is responsible to follow current data sheets.

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