EPO-KEM PRODUCT DATA SHEET

EPOFLEX 60

Seamless, liquid applied, hard-elastic waterproof membrane (revised 9-7-01)

DESCRIPTION

EPOFLEX 60 is a two component polyurethane material based on low viscosity, solvent-free branched polyol and aromatic poly-isocyanates.
EPOFLEX 60 is formulated to be permanently elastic and has extremely low shrinkage.

FEATURES

When mixed, applied and cured correctly, ***EPOFLEX 60*** has the following features:

- Permanently elastic
- Shock resistant
- Crack bridging
- Water tight
- Seamless
- Tough and resistant to mechanical damage
- Resistant to most common chemicals
- Fatigue resistant

Westgate Bridge Melbourne

USES

EPOFLEX 60 is a liquid applied waterproof membrane with some unique physical properties. It is quite hard and tough but at the same time has elastic properties which allow it to stretch and maintain cover to small cracks.
These unique properties of ***EPOFLEX 60*** means it is suitable for some strenuous mechanical tasks not normally associated with membranes.

FINISH

Grey in colour. Smooth, glossy appearance when cured.
Custom colours available on request.
May be top-coated with a variety of EPO-KEM polyurethane products to create the desired surface finish, texture and colour.

THICKNESS

Minimum of 1.5mm up to a maximum of 6mm. An optimum thickness is determined by design considerations which include the profile of the substrate and the crack bridging ability and ultimate elongation required. Generally, the thickness of ***EPOFLEX 60*** and the speed of movement (expansion & contraction) will both effect its' ultimate elongation and ability to bridge cracks.

TYPICAL CURED PROPERTIES
(measured at 20ºC)

Specific Gravity	:	ca. 1.45 – 1.55
Appearance	:	coloured, smooth glossy surface
Shrinkage after curing	:	negligible
Ultimate elongation	:	ca. 60% @ +20ºC
		ca. 5% @ -20ºC
E-modulus	:	ca. 125 MPa
Hardness	:	ca. 60 Shore D
Tensile Strength		
ASTM D 412	:	12 – 14 N/mm^2
Bond Strength (steel)	:	>5 N/mm^2
Impact Resistance	:	3 – 5 N/mm^2

MATERIAL PROPERTIES
(uncured)

Viscosity	:	adjustable from 200 mPa.s
Mix ratio (by weight)	:	833 parts Component "A"
		167 parts Component "B"
Pot life (500gms)	:	approx. 45 mins + @ 10ºC
		approx. 30 minutes @ 20ºC
		approx. 20 minutes @ 30ºC
Minimum curing temp.	:	10ºC
Initial cure	:	24 hours @ 25ºC
95%+ of full cure	:	72 hours @ 25ºC

Supplier:
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BASES (substructures)	**CONCRETE:** Must be clean, completely dry, free from grease and be aged for a minimum of 28 days. New concrete must be a minimum of 20mPa and be finished by steel trowel followed by a light brooming to promote good bonding. Sand/cement screeds must adhere firmly to the substrate. **STEEL:** Must be completely free of rust and scale. Grit blast in accordance with SA 2.5. Apply a coat of ***Primer PU/LP 2581*** within 4 hours of grit blasting. This information is not intended to be exhaustive, but bases must be designed with these requirements included. Other design considerations are drainage, edge and joint detail. EPO-KEM document **"SPECIAL CONDITIONS FOR FLOOR SUBSTRUCTURES"** should also be consulted.
INSTALLATION	**SURFACE PREPARATION:** Check new base is constructed to minimum requirements as above. Base should be clean and free from contamination. Always carry out an adhesion test before proceeding with installation. Old concrete should be mechanically prepared by e.g. shotblasting or grinding to remove cement laitance and any contamination. Concrete bases require special care due to their slightly porous nature and tendency to cracking. Prime dry surface with ***EPO-KEM PRIMER GVM/S*** by roller or spray using 15 – 25kg for every 100m^2 of surface area. **REPAIRS:** An expert must do any repairs needed on a concrete base. **APPLICATION:** ***EPOFLEX 60*** is better to be installed by a competent specialist contractor approved by EPO-KEM. **MIXING:** The contents of Component A will require stirring to thoroughly re-blend fillers that may have settled or separated during storage or transport. When this is complete, add appropriate portion of Component B and mix well for 3-5 minutes with a spiral drill stirrer. Do not mix more material than can be spread within 15 – 20 minutes. **SPREADING:** Large areas of ***EPOFLEX 60*** are installed utilising specialist mixing and pumping/spraying equipment. This should only be attempted by a competent specialist surfacing contractor approved by EPO-KEM. Smaller areas may be applied by a more simple method but extreme care must still be taken and appropriate mixing equipment used. The mixed ***EPOFLEX 60*** materials are spread evenly over the prepared and primed base by screeding with a notched spreader to regulate the desired thickness. Pour mixed material onto substrate and spread using a notched trowel. The thickness will be determined by a prior design recommendation. Discard any material that starts to warm in the mixing drum before it can be used.
DILUTION	None permitted.
COVERAGE	***EPO-KEM PRIMER GVM/S*** 0.15 – 0.25 kg per m^2 ***EPOFLEX 60*** 2.5 – 9.0 kg per m^2 **** OPTIONAL Topcoats*** ***EPO-KEM COATING PU/S(T) or PU/SH(T) (matt or satin)*** 0.25 kg per m^2
CURING	Full cure will depend on the ambient temperature and relative humidity of the prevailing conditions. Full cure is only obtained after 7 days.
SAFETY	When mixing and applying any of the above-mentioned products, provide adequate ventilation. Users should avoid spillages and contact with skin or eyes. An **MSDS** (material safety data sheet) is available for each component and should be consulted before use. Clean up of both tools and skin is possible with warm soapy water prior to the product curing.

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