


EPO-KEM PRODUCT DATA SHEET

EPO-KEM SYNTHETIC FLOOR EN

Ceramic filled epoxy, heavy duty floor surfacing (revised 19-5-97)

DESCRIPTION	<p>EPO-KEM SYNTHETIC FLOOR EN is a two component, trowel applied heavy duty flooring system with some unique properties. EPO-KEM SYNTHETIC FLOOR EN contains a type of ceramic filler and a portion of polyurethane resin which imparts a very tough surface. EPO-KEM SYNTHETIC FLOOR EN has a textured, seamless and even surface with a pleasant speckle appearance. It has extremely high wear resistant and is highly resistant to the most frequent chemicals and solvents. EPO-KEM SYNTHETIC FLOOR EN is commonly used as a flooring system in production situations, warehousing, food processing and chemical plants, pharmaceutical plants, food manufacturing, warehouses, kitchens, canneries, bakeries, butcher shops, abattoir's, breweries and beverage manufacturing areas.</p>				
FEATURES	<p>When installed correctly, EPO-KEM SYNTHETIC FLOOR EN has the following features:</p> <ul style="list-style-type: none"> • Seamless, textured and even surface • Terrazzo effect • Matched coving • Waterproof • Adjustable thickness to suit different uses • Decorative, 14 colours available • Extremely tough and resistant to wear • Easy to keep clean • Low maintenance • Resistant to most common chemicals 				
USES	<p>EPO-KEM SYNTHETIC FLOOR EN is most suitable for use in areas where cleanliness, appearance and the functionality of the floor is most important. The floor provides the most robust of surfaces available while maintaining a pleasant appearance. The inherent properties of this flooring system also make it ideal for:</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> Paper Mills Refineries Station Platforms Garages/workshops Food Processing </td> <td style="vertical-align: top;"> Abattoir's Pharmaceutical industry Production Lines Fish Processing Printing industry </td> <td style="vertical-align: top;"> Dairies Cold Storage Breweries Canneries Butcher Shops </td> </tr> </table>		Paper Mills Refineries Station Platforms Garages/workshops Food Processing	Abattoir's Pharmaceutical industry Production Lines Fish Processing Printing industry	Dairies Cold Storage Breweries Canneries Butcher Shops
Paper Mills Refineries Station Platforms Garages/workshops Food Processing	Abattoir's Pharmaceutical industry Production Lines Fish Processing Printing industry	Dairies Cold Storage Breweries Canneries Butcher Shops			
FINISH	<p>A terrazzo effect surface with a slight texture. EPO-KEM SYNTHETIC FLOOR EN is seamlessly applied by screed box and mechanical power trowel. As a result the surface is homogenous and flat. Trowel marks may be visible however, due to the mortar nature of the system. The trowelled surface is finished with one or two coats of a polyurethane sealer which adds to the impervious nature of the matrix and makes the surface easier to clean. Available in 14 colours from the EPO-KEM Colour Chart.</p>				
MAINTENANCE	<p>Maintenance is similar to an industrial ceramic tiled floor. Typical procedures include scrubbing machines, mild chemicals and pressure water cleaners. Proper maintenance will extend the life of the floor. Don't allow chemicals or food stuffs to sit and concentrate on the surface.</p>				
THICKNESS	<p>5mm minimum and all thickness' greater although it is seldom necessary to go above 8mm. The thickness selection will depend on the proposed end use of the floor and the condition of the substrate.</p>				
CHEMICAL RESISTANCE	<p>Very good resistance to most commonly used chemicals. Refer to the Chemical Resistance Chart on the back page for specific information.</p>				
HOW TO SPECIFY	<p>EPO-KEM SYNTHETIC FLOOR EN is to be installed to a nominal thickness of _____mm in accordance with the manufacturers specifications using specialist mixing, spreading and trowelling equipment. The selected colour(s) are _____ (choose from the EPO-KEM Colour Chart) in accordance with the layout plan as detailed _____ (refer to drawing #). Allow to cure for a minimum of 48 hours before allowing traffic. Installation must only be carried out by EPO-KEM INDUSTRIES PTY LTD or an approved contractor of EPO-KEM.</p>				

Supplier:

Epo-Kem Industries Pty Ltd ABN 66 119 228 438
 22 Brooke Ave, Southport, QLD 4215
 AUSTRALIA

PHONE: +61 7 5532 4690
 FAX: +61 7 5591 5559
 E-MAIL: info@epo-kem.com

www.EPO-KEM.com

EPO-KEM PRODUCT DATA SHEET

TYPICAL CURED PROPERTIES (measured at 20°C)	Specific Gravity : ca.2.0 Bending Tensile Strength (N/mm ²) : ca. 30 MPa Compressive Strength : ca. 75 MPa E-Modulus : ca. 10,000 Mpa Wear resistance (Amsler) : ca. 1.5mm Shrinkage : negligible Non slip quality : very good Bond strength (steel/steel N/mm ²) : ca. 20												
BASES (substructures)	<p>CONCRETE: Most important is the inclusion of a waterproof membrane to ensure no water or water vapour can enter the concrete structure. Concrete must be a minimum of 20mPa, a thickness of 100mm and be finished by steel trowel followed by a light brooming to promote good bonding. Flatness tolerance should be as flat and level as the finished floor is required. The application of EPO-KEM SYNTHETIC FLOOR EN may improve the flatness of the foundation but will require additional materials to achieve same. Preparation of the base is of paramount importance to the quality of the surface finish. Concrete bases must be cured for a minimum of 1 month before applying EPO-KEM SYNTHETIC FLOOR EN.</p> <p>STEEL: Steel substructures must be well supported and solid with a minimum of flex possible.</p> <p>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.</p>												
INSTALLATION	<p>SURFACE PREPARATION: Concrete 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.</p> <p>Steel Steel substructures must be fully degreased, de-rusted and the rolling skin removed. This is often only achieved by blasting to Class 2½ (min.) after chemical degreasing. Within 4 hours of blasting a layer of EPO-KEM PRIMER EM should be applied. After a minimum of 4 hours and a maximum 3 days curing, the primed steel surface must be finished with EPO-KEM SYNTHETIC FLOOR EN.</p> <p>REPAIRS: An expert must do any repairs needed on a concrete base. Filling of non-structural cracks and low areas may be done with EPO-KEM SYNTHETIC FLOOR EN FILLER. It may be necessary to enlarge cracks to ensure they can be sufficiently filled.</p> <p>APPLICATION: EPO-KEM SYNTHETIC FLOOR EN must only be installed by a competent specialist surfacing contractor approved by EPO-KEM. Specialist equipment such as static mixers, Zyklus, Beba, screed box and power trowels are required.</p>												
DILUTION	All materials must be used as they are supplied, no dilution is permitted.												
MATERIAL PROPERTIES (uncured)	<p>Pot Life : @ 10°C approx. 60 minutes @ 15°C approx. 45 minutes @ 20°C approx. 30 minutes</p> <p>Application Temp. Range : 10 – 30°C (outside this range, consult the manufacturer)</p> <p>Mix Ratio : COMPONENT A 96.12 parts COMPONENT B 3.88 parts (by weight)</p> <p>Curing : <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">10°C</td> <td style="padding-right: 20px;">Light Foot Traffic</td> <td>Full Cure</td> </tr> <tr> <td>20°C</td> <td>48 hrs</td> <td>14 days</td> </tr> <tr> <td>30°C</td> <td>24 hrs</td> <td>7 days</td> </tr> <tr> <td></td> <td>16 hrs</td> <td>4 days</td> </tr> </table> </p> <p>Packaging : 25 kg kits</p> <p>Shelf Life : 12 months in sealed containers away from heat and moisture. COMPONENT A is pre-blended with fillers, just add the pre-measured COMPONENT B and mix. Do not attempt to split kits due to the mix ratio.</p>	10°C	Light Foot Traffic	Full Cure	20°C	48 hrs	14 days	30°C	24 hrs	7 days		16 hrs	4 days
10°C	Light Foot Traffic	Full Cure											
20°C	48 hrs	14 days											
30°C	24 hrs	7 days											
	16 hrs	4 days											

Supplier:

 Epo-Kem Industries Pty Ltd ABN 66 119 228 438
 22 Brooke Ave, Southport, QLD 4215
 AUSTRALIA

 PHONE: +61 7 5532 4690
 FAX: +61 7 5591 5559
 E-MAIL: info@epo-kem.com

www.EPO-KEM.com

EPO-KEM PRODUCT DATA SHEET

COVERAGE	<p>EPO-KEM PRIMER EM 0.1 – 0.2 kg per m²</p> <p>EPO-KEM PRIMER GVM/S 0.2 – 0.25 kg per m²</p> <p>EPO-KEM SYNTHETIC FLOOR EN] 10 kg per m²</p> <p>EPO-KEM COATING PU/SH Clear (gloss or satin) 0.2 kg per m² * OPTIONAL</p>																																																																																																																																																																																																																																																																																																												
THINNERS	<p>EPO-KEM THINNERS E is recommended for diluting the primers up to a maximum of 15%. EPO-KEM SYNTHETIC FLOOR EN may not be thinned under any circumstances. EPO-KEM THINNERS PU/SH are recommended for thinning EPO-KEM COATING PU/SH up to a maximum of 20% addition rate. EPO-KEM THINNERS PU/SH may also be used for cleaning tools while the materials are still uncured. Other products must not be thinned.</p>																																																																																																																																																																																																																																																																																																												
SAFETY	<p>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.</p>																																																																																																																																																																																																																																																																																																												
CHEMICAL RESISTANCE	<p>The table below represents the resistance of the EN layer and/or the topcoat PU/SH when exposed continuously to the chemicals listed at 25°C. All samples were cured for 7 days at 20°C and tests were discontinued after two months (unless previously terminated). Experience has shown that where there was no attack by chemicals during this period, the expected working life of the floor remains unaffected by periodic exposure, assuming that normal housekeeping measures are carried out. Where the system shows reduced resistance, the total time of exposure should also be taken into account. However, caution should be exercised where softening or blistering occurs within ten days. Contact EPO-KEM for information on chemicals other than those shown in the chart below:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">CHEMICAL</th> <th colspan="10">EXPOSURE TIME</th> </tr> <tr> <th>% soln.</th> <th>1 day</th> <th>2 days</th> <th>7 days</th> <th>10 days</th> <th>2 weeks</th> <th>3 weeks</th> <th>1 month</th> <th>2 mths</th> </tr> </thead> <tbody> <tr><td>Acetic Acid</td><td>10</td><td>U</td><td>U</td><td>S/R</td><td>S/B</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>Citric Acid</td><td>10</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Formic Acid</td><td>10</td><td>U</td><td>U</td><td>S/B</td><td>S/B</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>Lactic Acid</td><td>25</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Nitric Acid</td><td>10</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Phosphoric Acid</td><td>20</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Sulphuric Acid</td><td>10</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Ammonia</td><td>10</td><td>U</td><td>U</td><td>U</td><td>S/R</td><td>S/R</td><td>S/B</td><td>X</td><td>X</td></tr> <tr><td>Hydrogen Peroxide</td><td>10</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Sodium Carbonate</td><td>20</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Sodium Chloride</td><td>10</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Sodium Hydroxide</td><td>20</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Sodium Hypochlorite</td><td>1</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Water (distilled)</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Acetone</td><td>95</td><td>U</td><td>S/R</td><td>S/B</td><td>DE</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>Ethanol</td><td>10</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>S/R</td><td>S/B</td></tr> <tr><td>Ethanol</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Ethoxy Ethyl Acetate</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Methylene Chloride</td><td></td><td>S/R</td><td>S/B</td><td>DE</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>Petrol (leaded)</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Trichloroethane</td><td></td><td>S/R</td><td>S/B</td><td>DE</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>Xylene</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Mineral Oils (all types)</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Vegetable Oils</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>X</td></tr> <tr><td>Beers</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Fruit Juices</td><td></td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Soap Solution</td><td>20</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> <tr><td>Sugar Solution</td><td>30</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td><td>U</td></tr> </tbody> </table> <p style="margin-top: 10px;"> KEY: U = Unaffected DE = destroyed X = discontinued S/R = softens slightly but recovers fully after drying. S/B = Softens, blisters. </p> <p style="margin-top: 10px;"> NITES: N These solvents will cause swelling and softening of the SL layer. Z These solvents will cause swelling and probable destruction of the SL layer within 3 days. </p>	CHEMICAL	EXPOSURE TIME										% soln.	1 day	2 days	7 days	10 days	2 weeks	3 weeks	1 month	2 mths	Acetic Acid	10	U	U	S/R	S/B	X	X	X	X	Citric Acid	10	U	U	U	U	U	U	U	U	Formic Acid	10	U	U	S/B	S/B	X	X	X	X	Lactic Acid	25	U	U	U	U	U	U	U	U	Nitric Acid	10	U	U	U	U	U	U	U	U	Phosphoric Acid	20	U	U	U	U	U	U	U	U	Sulphuric Acid	10	U	U	U	U	U	U	U	U	Ammonia	10	U	U	U	S/R	S/R	S/B	X	X	Hydrogen Peroxide	10	U	U	U	U	U	U	U	U	Sodium Carbonate	20	U	U	U	U	U	U	U	U	Sodium Chloride	10	U	U	U	U	U	U	U	U	Sodium Hydroxide	20	U	U	U	U	U	U	U	U	Sodium Hypochlorite	1	U	U	U	U	U	U	U	U	Water (distilled)		U	U	U	U	U	U	U	U	Acetone	95	U	S/R	S/B	DE	X	X	X	X	Ethanol	10	U	U	U	U	U	U	S/R	S/B	Ethanol		U	U	U	U	U	U	U	U	Ethoxy Ethyl Acetate		U	U	U	U	U	U	U	U	Methylene Chloride		S/R	S/B	DE	X	X	X	X	X	Petrol (leaded)		U	U	U	U	U	U	U	U	Trichloroethane		S/R	S/B	DE	X	X	X	X	X	Xylene		U	U	U	U	U	U	U	U	Mineral Oils (all types)		U	U	U	U	U	U	U	U	Vegetable Oils		U	U	U	U	U	U	U	X	Beers		U	U	U	U	U	U	U	U	Fruit Juices		U	U	U	U	U	U	U	U	Soap Solution	20	U	U	U	U	U	U	U	U	Sugar Solution	30	U	U	U	U	U	U	U	U
CHEMICAL	EXPOSURE TIME																																																																																																																																																																																																																																																																																																												
	% soln.	1 day	2 days	7 days	10 days	2 weeks	3 weeks	1 month	2 mths																																																																																																																																																																																																																																																																																																				
Acetic Acid	10	U	U	S/R	S/B	X	X	X	X																																																																																																																																																																																																																																																																																																				
Citric Acid	10	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Formic Acid	10	U	U	S/B	S/B	X	X	X	X																																																																																																																																																																																																																																																																																																				
Lactic Acid	25	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Nitric Acid	10	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Phosphoric Acid	20	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Sulphuric Acid	10	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Ammonia	10	U	U	U	S/R	S/R	S/B	X	X																																																																																																																																																																																																																																																																																																				
Hydrogen Peroxide	10	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Sodium Carbonate	20	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Sodium Chloride	10	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Sodium Hydroxide	20	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Sodium Hypochlorite	1	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Water (distilled)		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Acetone	95	U	S/R	S/B	DE	X	X	X	X																																																																																																																																																																																																																																																																																																				
Ethanol	10	U	U	U	U	U	U	S/R	S/B																																																																																																																																																																																																																																																																																																				
Ethanol		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Ethoxy Ethyl Acetate		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Methylene Chloride		S/R	S/B	DE	X	X	X	X	X																																																																																																																																																																																																																																																																																																				
Petrol (leaded)		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Trichloroethane		S/R	S/B	DE	X	X	X	X	X																																																																																																																																																																																																																																																																																																				
Xylene		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Mineral Oils (all types)		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Vegetable Oils		U	U	U	U	U	U	U	X																																																																																																																																																																																																																																																																																																				
Beers		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Fruit Juices		U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Soap Solution	20	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				
Sugar Solution	30	U	U	U	U	U	U	U	U																																																																																																																																																																																																																																																																																																				

Supplier:

Epo-Kem Industries Pty Ltd ABN 66 119 228 438
22 Brooke Ave, Southport, QLD 4215
AUSTRALIA

PHONE: +61 7 5532 4690
FAX: +61 7 5591 5559
E-MAIL: info@epo-kem.com

www.EPO-KEM.com