

KEMCRETE EP

Unique SF- Epoxy Floor, Chemical Resistant & Exceptional
Temperature Resistance -40°C up to +120°C

1 .Description:

KEMCRETE EP floor coating is a unique free Epoxy based on special mixed hardeners. It is dense, impervious and resistant to chemicals and designed for continuous protection in light to medium duty applications at thickness between 0.5 – 1.5 mm. It is hygienic, wear and abrasion resistant, resistant to temperature between - 40°C up to +120°C and whenever robust long lived floor is required

2 .Scope:

Prokem has continued to strengthen its position as the Egyptian market leader in construction chemicals during the last few years, despite the global economic situation. As part of this expansion, *Prokem* has maintained a strong focus on providing flooring system for many different applications and extending them in the market.

Today *Prokem* provides a full range of flooring solution, which meet or exceed all of the latest standards and requirements for both new and refurbishment works. The latest developments from our new technologies and new systems from our acquisitions, together with testing and approvals to updated standards, make it necessary to update and expand this brochure for our flooring products and their system build-ups

Additionally *Prokem* has developed new products for additional industrial and commercial applications, and also now helps you to define the most suitable flooring products and systems for your projects in accordance with the latest information on sustainability and in regard to their whole life cycle costing.

In addition to the most commonly used products and the typical system build-ups and details outlined, there are many more specialized flooring solutions available from *Prokem*. These are detailed in separate brochures and documentation for their specific application and areas of use, or on the Internet at: www.prokemsc.com where they are regularly updated.



As stated earlier, *Prokem* is the Egyptian market leader in construction chemicals and as such we provide a full range of specialist construction solutions in our “Basement to the Roof” approach.

For full details of the *Prokem* service and support available, please contact the Technical office

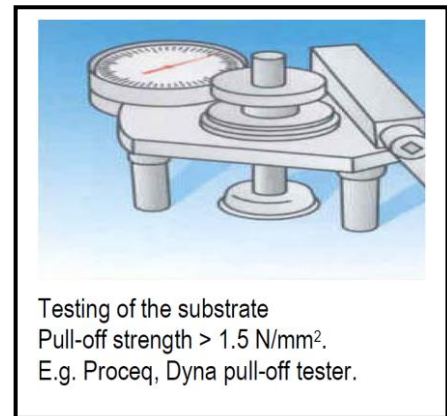
3 .Limitation:

3.1. Pull off and compressive strength

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².

The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc.

If in doubt, apply a test area first.



3.2. Moisture content

Prior to application, confirm substrate moisture content, r.h. and dew point

If moisture content < 4% pbw prime with **SEALER E43** or **SEALER E115**

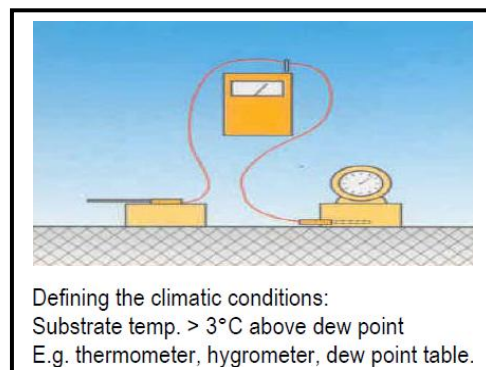
Tramex moisture meter. There must be no rising moisture according to ASTM D 4263

If moisture content > 4% pbw apply a (permanent moisture barriers) system with **WETSEAL** (please refer to Products Data Sheet)

3.3 Ambient and surface temperature

Ambient and Surface temperature:

- Min. +10°C (but at least 3°C above dew point)
- Max. +30°C



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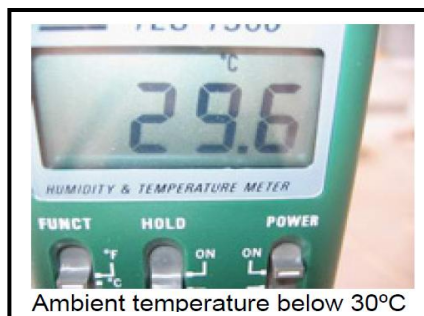
3.4. Substrate temperature:



Substrate temperature > 10°C

3.5. Ambient temperature:

Note: The speed of any chemical reaction is dependent on temperature. As a general rule, the higher the temperature, the more rapid the reaction.

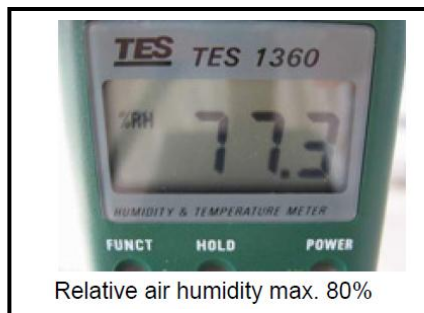


Ambient temperature below 30°C

3.6. Relative air humidity:

Beware of condensation!

The substrate must be at least 3°C above dew point.



Relative air humidity max. 80%

4. Tools and Equipment

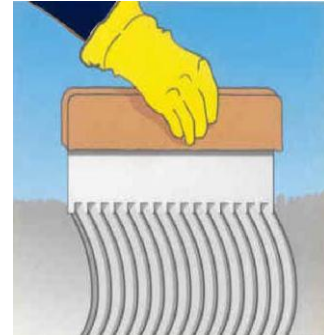
Professional equipment is required to achieve a functioning floor, such as: vacuum shot blaster, grinder, scabblers etc.



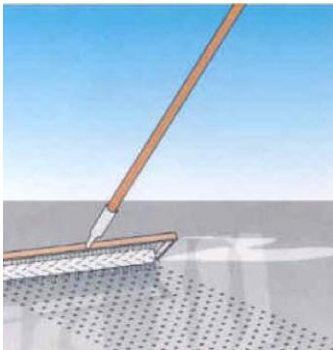
Preparation of the substrate:
 Blast cleaning or other mechanical means e.g. Blastrac



Even application of Primer coat:
 If moisture content < 4% pbw, prime with **SEALER E43** or **SEALER E115**. If moisture content > 4% pbw apply (a permanent moisture barrier) system with **WETSEAL** with medium to long haired roller or brush. E.g. Polyplan roller and brush



Spreading of **EPOXY PUTTY** or **KEMREPAIR EP** with notched trowel. E.g. Polyplan notched trowel 5/7 mm.



Removal of entrapped air:
 Spike rolling immediately e.g. Polyplan spike roller.



For lifting, transportation, storing and filling of 200 Litre drums. E.g. Polyplan 'barrel cart'.



Decanting of large drums into smaller units. E.g. Polyplan 'stop cock'.



Electric drum mixer.



Pneumatic drum mixer



RGE 162 DUO

5 .How to Use:

5.1. Surface preparation:

5.1.1. The preferred methods of substrate preparation are high pressure water jetting, captive blasting, scarifying (using Bartel, Erut, Von Arx or similar machines) or grit blasting, acid etching should only be used if other means of preparation are not available or are impractical.

5.1.2. Light contaminations of oil, grease, fats or similar should be removed before starting other forms of



Cleaning of the surface

preparation using degreasing solutions (as **KEM DEGRESEAER** or **KEM DEGRESEAER WB**). If deep contamination is present it should be treated by hot compressed air.

5.1.3. If the substrate has been damaged by physical or chemical attack, it should be cut back until sound dense uncontaminated concrete is exposed. Repair can be carried out using **EPOXY PUTTY** or **KEMREPAIR EP**.



Vacuum shot blasting

5.1.4. When repairs are executed with cementitious products, they should be cured properly before applying the **KEMCRETE EP**.



Clean substrate

5.1.5. If the flatness of the finished floor is important, high spots shall be ground off and low spots filled out.

5.1.6. When repairs and leveling are complete, the final surface preparation shall be carried out to remove all laitance and weak or friable concrete, leaving aggregate exposed.

5.1.7. Remove all dust and debris from the prepared surface.

5.1.8. Close the prepared areas to vehicular and pedestrian traffic.

5.2. Mixing:

- 5.2.1. Prior to mixing, stir component A (resin) and add all of component B (hardener).
- 5.2.2. Make sure the hardener is fully emptied into the resin component
- 5.2.3. Mix both components thoroughly with a low speed electric stirrer (300 - 400 rpm).
- 5.2.4. Mix for at least 3 minutes until a uniform mix has been achieved.
- 5.2.5. Transfer mixed material to a clean container.
- 5.2.6. Mix for another minute.



5.3. Priming:

5.3.1. Prime the prepared concrete substrate using **SEALER E43** (surface sealer) or **SEALER E115** (impregnate sealer) as a sealer coat at coverage rate 0.2 –0.3 kg/m².

5.3.2. Mix components A and B together using a paint stirrer, pallet knife or similar until it is streak free.

5.3.3. Using a paint brush or medium pile paint roller, apply the mixed primer to the prepared substrate

5.3.4. If the concrete absorbs the primer, leaving the surface matt instead of glossy, the surface should be re-primed.

5.3.5. For green concrete or wet concrete (moisture content >4%) use **WETSEAL** at a coverage rate of:

0.2 – 0.3 kg /m²

5.3.6. Ensure the mixing equipment is working and that a back

up mixer is available in case of a breakdown.

5.3.7. When using electrically powered mixing equipment verify the security of the power supply.



5.4. Application:

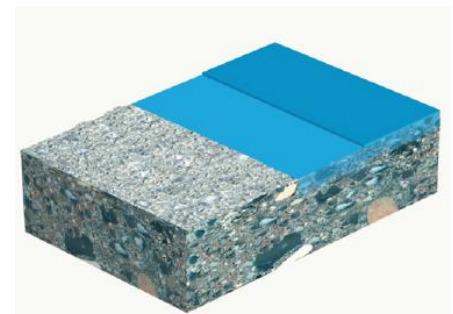
5.4.1. Make sure, that the application of **KEMCRETE EP** is still within the over coating time.

5.4.2. **KEMCRETE EP** as a coating can be applied by short-piled roller (crosswise).

5.4.3. Sealer coats can be applied by squeegee and then back-rolled (crosswise) with a short piled roller.

5.4.4. Freshly applied **KEMCRETE EP** must be protected from damp, condensation and water for at least 24 hours.

5.4.5. **KEMCRETE EP** should be allowed to finally cure for 7 days before heavy traffic.



5.5. Cleaning:

Clean all tools and application equipment with solvent immediately after use. Hardened / cured material can only be mechanically removed.

6. Watch Points: (Do not)

- 6.1. Apply **KEMCRETE EP** when the substrate is less than 10°C or when the ambient temperature will fall below 10°C during application or curing, unless heating equipment is available to raise the ambient temperature.
- 6.2. Prime areas unless they can be covered before the primer gels.
- 6.3. Allow primer to form pools.
- 6.4. Mix more material than the can be laid within the open time of the product.
- 6.5. Attempt to remix material once it starts to stiffen.

7. Theoretical Coverage:

7.1. Concrete substrate:

1st step

Sealer E115: 0.2 – 0.3 kg /m²

*In case of smooth surface, high dense concrete and hygienic surface solvent free sealer (**SEALER E43**) can be used.

*In case of wet or green concrete substrates **WETSEAL** can be used.

2nd step

- **High build system (smooth finish)**
2 coats of **KEMCRETE EP:** 0.5 – 0.6 kg/m² @ 0.3 – 0.4 mm D.F.T
- **High build system (texture finish)**
2 coats of **KEMCRETE EP:** 0.8 – 1 kg/m² @ 0.5 – 0.6 mm D.F.T
- **Multi layer system (anti slip finish)**
2 coats of **KEMCRETE EP:** 1.6 – 2 kg/m² @ 1 - 3 mm D.F.T
- **Multi layer system (anti slip finish)**
Filler: 5 – 8 kg/m² @ 0.3-0.7 mm

7.2. Steel Substrate:

1st step

KEMPRIM M: 0.2 – 0.3 kg/m²

2nd step

2 coats of **KEMCRETE EP:** 0.5 – 0.6 kg/m² @ 0.3 – 0.4 mm D.F.T.