Binder TP E27

Description

Binder TP E27 is a multifunctional 2-component epoxy system that can be used as a binder for mortar flooring.
This binder is characterized by, and renowned for its good UV resistance, high transparency and its easy workability.

The Binder TP E27 system is specially formulated by Quartzline making it different to other more traditional systems, the two components have been formulated to match strict specifications.

The Binder TP E27 B-Component is different to many other standard grade hardeners. This hardener needs only 27 parts to 100 parts of resin instead of the normal 50 to 100 for standard grade binder systems.
This results in optimal workability, higher transparency and a very low yellowing tendency compared to traditional systems.

Due to the viscosity of the system there will be a good balance between sufficient binder between the mortar and the drip off to the substrate to ensure a good bonding.

Properties

Near solvent free	
Low viscosity	
High bonding strength	
Alkylphenol free	
Easy application	
Electrical conductivity	>100 GΩ
Viscosity [1] (mPa.s)	1000 – 1300
Density [2] (g/cm^3)	1,90
Shore Hardness [3]	> D80
Compression strength [4] (N/mm^2)	> 32
Flexural strength [4] (N/mm^2)	> 8
Youngs Modulus [5] (MPa)	~12100
Abrasion resistance [6] (mg)	12
Reaction to fire	Bfl-s1
Adhesive strength [7] (N/mm^2)	> 1.5 (Concrete fracture)

[1] = Brookfield, LV3, 30 RPM, @ 23ºC
[2] = ISO 2811-1, + 23ºC/50% R.H On the mortar
[3] = DIN 53505, 14 days / + 23ºC / 50% R.H
[4] = ISO 196-1 / @28days / + 23ºC/50% R.H On the mortar
[5] = EN 13412, 14 days/ + 23ºC / 50% R.H On the mortar
[6] = Taber, CS17, 10N load, 1000 Cycles on Topcoat E + PU MG
[7] = EN 4624, 14 days / + 23 ºC / 50% R.H

Form

Binder TP E27 A-Component: Clear, transparent liquid.
Binder TP E27 B-Component: Clear, transparent liquid.

Packaging

Binder TP E27 A-Component: 20 kg bucket, 200 kg Barrel and 1000 kg IBC
Binder TP E27 B-Component: 15 kg bucket, 180 kg Barrel and 1000 kg IBC

Also available in specially prepared 5 kg sets. These sets are specially made to be used with 50 kg of coloured or natural kiln dried mortar.

Shelf life/storage

Up to 6 months after production date if kept in the original, sealed, unopened and undamaged packaging and stored dry between +10 ºC and +30 ºC.

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Mixing

Mixing ratio: Binder TP E27 A-Component : Binder TP E27 B-Component
=
100 : 27 (by weight)

Add part B to part A and mix slowly for two minutes until the mixture turns from a turbid to a completely clear liquid.

Mixing is preferably done with a power mixer on low speed, from 300 to 400 RPM, with a Quartzline WK 90 mixer paddle.

Pour the mixed binder onto the mortar and mix until a complete homogeneous mixture occurs. This is preferably done with a hand mixer in combination with a WK200 spindle. (A forced action mixer may also be used)

Mix thoroughly and make sure the mixture is homogeneous.

System construction

Primer for porous substrates:
Quartzline “Primer BHH” or Primer Universal.

Primer for non-porous substrates:
Quartzline Primer GW is used on non-absorbent substrates. This primer has excellent physical adhesion, especially for ceramic tiles.

Wearing course: Mortar flooring bonded with Binder TP E27

Topcoat: Quartzline Topcoat E

The Quartzline Binder TP E30 is part of the following systems:

Mortar-Line Trowel

Consumption

Binder TP E27 for Mortar flooring 10% to 17% on the weight of the mortar.

Quantity of dry mortar	10% Binder	11% Binder	12% Binder	13% Binder	14% Binder	15% Binder
25 kg	A = 1,97 kg B = 0,53kg	A = 2,17 kg B = 0,58 kg	A = 2,36 kg B = 0,64 kg	A = 2,56 kg B = 0,69 kg	A = 2.76 kg B = 0,74 kg	A = 2,95 kg B = 0,80 kg
50 kg	A = 3,94 kg B = 1,06 kg	A = 4,33 kg B = 1,17 kg	A = 4,72 kg B = 1,28 kg	A = 5,12 kg B = 1,38 kg	A = 5,51 kg B = 1,49 kg	A = 5,91 kg B = 1,59kg
75 kg	A = 5,91 kg B = 1,59 kg	A = 6,50 kg B = 1,75 kg	A = 7,08 kg B = 1,92 kg	A = 7,68 kg B = 2,07 kg	A = 8,27 kg B = 2,23 kg	A = 8,86 kg B = 2,39 kg
100 kg	A = 7,87 kg B = 2,13 kg	A = 8,66 kg B = 2,34 kg	A = 9,45 kg B = 2,55 kg	A = 10,24 kg B = 2,76 kg	A = 11,02 kg B = 2,98 kg	A = 11,81 kg B = 3,19 kg

* A = Resin TP en B = Hardener E27

Substrate preparation

All dust, loose and friable material must be fully removed from all surfaces before applying the product, preferably using a brush and/or industrial vacuum cleaner.

The substrate must be clean and dry and free of dirt, oil, grease and any other impurities or contaminants.

The substrate must be sound and sufficiently compression resistant (at least 25 N/mm²), with a minimum adhesive strength of 1,5 N/mm².

If the epoxy surface is more than 48 hours old, always perform a preliminary adhesion test.

Application conditions

Substrate temperature:	Minimum 10ºC, maximum +30 ºC
Ambient temperature:	Minimum 12ºC, maximum +30 ºC
Relative air humidity:	Maximum 70% R.H.
Dew point:	Beware of condensation!

The temperature of the substrate and non-hardened material must be at least 3ºC higher than the dew point to reduce the risk of condensation, efflorescence or stickiness (carbamate formation) on the floor finish.

Remark: Low temperatures and high air humidity increase the risk of efflorescence or carbamate formation.

Not to be used as a primer or finishing layer!

Application

Spread the mixed material onto the floor and level it with a trowel.

To check the floor for levelness, please use a 1000 Watt floodlight lamp.

Application with a power trowel is also possible.

Processing time @ 20 ºC	15 minutes
Foot traffic @ 20 ºC	2 days
Fully Cured @ 20 ºC	7 days

Check the R.H. and dew point before application.

Remarks

Do not apply the Quartzline flooring systems on substrates with rising moisture.

After application, all Quartzline floors must be protected from damp, condensation and water for at least 24 hours.

Mixed materials must be processed immediately as workability will be reduced when pot-life expires.

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

If heating is required do not use gas, oil, paraffin or other fossil fuel heaters. These produce large quantities of both CO^2 and water vapour which may adversely affect the finish.
For heating, only use electrically powered warm air blower systems.
Do not use any underfloor heating during application or for the first 48 hours, after this period you may increase the temperature gradually.

Cleaning/maintenance

To maintain the appearance of the floor after application, the flooring system must be kept clean and all spillages removed immediately.
The floor must be cleaned regularly using a rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques etc.
Always use suitable detergents and waxes.

Clean the floor with tepid water. Never use hot water (warmer than 40 °C).

Value base

All technical data stated in this technical data sheet is based on laboratory tests.
Actual measured data may vary due to circumstances beyond our control.

Health and safety information

For information and advice on safety handling, storage and disposal of chemical products, users should refer to the most recent material safety data sheet containing physical, ecological, toxicological and other safety related data.

Legal notes

This information, and in particular the recommendations related to the application and end use of Quartzline products, is provided in good faith based on our current knowledge and experience of the products. It is valid for products that are correctly stored, treated and applied under normal conditions in accordance with Quartzline's recommendations.

In practice, differences in materials, substrates and actual on-site conditions are such that no warranty in respect of merchantability or of suitability for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered.
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