



Epoxy High Strength Resin Screed

Product Data Sheet

Edition: 21/11/2011

Identification Number: 01 08 0102 001 0000001

Print Date: 01/05/2020

Product Description

Epoxy High Strength Resin Screed is a coloured 3-component solvent free epoxy resin based mortar for patching and screeding industrial floors subject to heavy traffic.

Uses

Warehouses
Machine shops
Workshops
Chemical plants
Water treatment plants
Storage areas
Plant rooms
Breweries
Pharmaceutical plants
Steel works

Characteristics / Advantages

Workshops high mechanical resistance
High resistance to abrasion
Good chemical resistance
Fast curing
Easy to apply
Durable freeze thaw resistance
Solvent free
Low odour
Easily maintained
Excellent application properties

Product Data

Form

Appearance / Colours

Resin - part A: transparent, liquid
Hardener - part B: brownish, liquid
Quartz sand - part C: coloured, powder
Colours: red, grey, green, natural

Packaging

Part A: 1.875 kg containers
Part B: 0.625 kg containers
Part C: 25 kg bag aggregate
Part A+B+C: 27.5 kg ready to mix units

Storage Conditions / Shelf- Life

24 months from date of production if stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.



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Technical Data

Density

Part A: ~ 1.10 kg/l at +23°C.

Part B: ~ 1.02 kg/l at +23°C

Mixed mortar: ~ 2.2 kg/l (DIN EN ISO 2811-1)

Solid Content

Resin: ~ 100% (by volume) / ~ 100% (by weight)

Mechanical/Physical Properties

Full system

Compressive strength:

~ 80 N/mm² (7 days / +23°C)

(EN 196-1)

Flexural Strength:

~ 40 N/mm² (7 days / +23°C / 50% r.h.)

(EN 196-1)

Tensile Strength

~ 15 N/mm² (7 days / +23°C)

Bond Strength

> 1.5 N/mm² (failure in concrete)

(EN 4624)

Thermal Resistance

Exposure	Dry Heat
Permanent	+50°C
Short term max.	7 d +80°C
Short term max.	12 h +100°C

Short-term moist/wet heat* up to +80°C where exposure is only occasional (i.e. during steam cleaning etc.). *No simultaneous chemical and mechanical exposure.

System Information

System Structure

Mortar Screed (3-40 mm layer thickness) / Repair Mortar:

Primer*: 1 x

Bonding bridge: 1 x

Screed: 1 x

Coated mortar Screed (3-40 mm layer thickness)
recommended for chemical exposure:

Primer*: 1 x

Bonding bridge: 1

Screed: 1 x

Impregnation: 1x

Coating:

* only necessary for strongly absorbent substrates.



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Substrate Quality

Concrete substrates 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.

Concrete Substrate Preparation

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.

Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.

Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products.

The concrete or screed substrate has to be primed or levelled in order to achieve an even surface.

High spots must be removed by e.g. grinding.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

Application Conditions / Limitations

Substrate Temperature +10°C min. / +30°C max.

Ambient Temperature +10°C min. / +30°C max.

Substrate Moisture Content < 4 % pbw moisture content.

Test method: Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet).

Relative Air Humidity 80 % r.h. max.

Dew Point Beware of condensation!

The substrate and uncured mortar must be at least 3°C above the dew point to reduce the risk of condensation or blooming on the mortar finish.

Application Instructions

Mixing Part A : part B : part C= 7.5 : 2.5 : 100 (by weight)



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Mixing Time

Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 2 minutes until a uniform mix has been achieved.

When parts A and B have been mixed, the quartz sand or if required the Extender T must be mixed with part A and B for a further 2 minutes until a uniform mix has again been achieved.

Over mixing must be avoided to minimise air entrapment.

Mixing Equipment

Part A + B must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

For part A + B + C mortars use a forced action mixer of rotating pan, paddle or tough type.

Application Method

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

If > 4% pbw moisture content, please ask Cactus for further information.

For strongly absorbent substrates apply a primer coat. The primer has to be cured tack free before the bonding bridge is applied.

Primer:

Make sure that a continuous, pore free film covers the substrate.

Apply by brush, roller or squeegee.

Bonding bridge / impregnation:

Make sure that a continuous, pore free film covers the substrate.

Apply by brush, roller or squeegee.

Mortar screed:

Apply the mortar screed evenly on the tacky bonding bridge, using levelling boards and guide rails as necessary. After a short waiting time compact and finish the mortar with a trowel or Teflon coated power float (usually 20 - 90 rpm). Power floats can only be used on mortar layers > 8 mm.

Consumption

Coating System	Consumption
Primer	0.3-0.5kg/m ²
Bonding Bridge	0.3-0.5kg/m ²
Mortar Screed Layer Thickness 3 - 40 mm	2.2kg/m ²
Impregnation	0.3-0.8kg/m ²
Coating	See data sheet
These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.	



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Cleaning of Tools

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

Pot Life

Temperatures	Time
+10°C	~ 60 minutes
+20°C	~ 40 minutes
+30°C	~ 25 minutes

Waiting time / Overcoating

Before applying coating allow:

Substrate Temperature	Minimum	Maximum
+10°C	24 hours	4 days
+20°C	14 hours	2 days
+30°C	8 hours	1 day

Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

Notes on Application / Limitations

Do not apply on substrates with rising moisture.

Freshly applied Epoxy High Strength Resin Screed should be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer.

Mortar screed is not suitable for frequent or permanent contact with water unless sealed.

For exact colour matching, ensure the quartz sand in each area has the same colour (sand is a natural product and colour differences can occur).

Under certain conditions, underfloor heating or high ambient temperatures combined with high point loading, may lead to imprints in the resin.

If heating is required do not use gas, oil, paraffin or other fossil fuel heaters, these produce large quantities of both CO₂ and H₂O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.



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Curing Details

Applied Product ready for use	Temperature	Foot Traffic	Light Traffic	Full Cure
	+10°C	~ 24 hours	~ 5 days	~ 10 days
	+20°C	~ 14 hours	~ 3 days	~ 7 days
	+30°C	~ 8 hours	~ 2 days	~ 5 days
Note: Times are approximate and will be effected by changing ambient conditions.				

Value Base

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Local Restrictions

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Cactus products, are given in good faith based on Cactus' current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Cactus' recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness 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. The user of the product must test the product's suitability for the intended application and purpose. Cactus reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



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