

ROCK FLOOR 166

2-PART EPOXY PRIMER, LEVELLING MORTAR AND INTERMEDIATE

DESCRIPTION

Rock Floor 166 is an economic, two-part, low viscosity epoxy resin.

Suitable for use in hot and tropical climatic conditions.

USES

Rock Floor 166 may only be used by experienced professionals.

For priming concrete substrates, cement screeds and epoxy mortars

- For low to medium absorbent substrates Primer citychem systems
- Binder for levelling mortars Intermediate layer underneath various citychem systems

CHARACTERISTICS / ADVANTAGES

- Low viscosity
- Good penetration
- Excellent bond strength
- Easy application
- Short waiting times
- Multi-purpose

ENVIRONMENTAL INFORMATION

LEED Rating

Rock Floor 166 conforms to the requirements of LEED

EQ Credit 4.2 : Low-Emitting Materials : Paints and Coatings SCAQMD Method 304 - 91 VOC Content < 100 g/l

APPROVALS / STANDARDS

Epoxy primer and levelling mortar according to EN 1504 - 2 : 2004 and EN 13813 : 2002

- “Products and systems for the protection and repair of concrete structures – Test method – Compatibility on wet concrete when exposed to the effects of humidity from the rear” according to the EN 13578 : 2004. Proof statement P 6239.

PRODUCT INFORMATION

Chemical base Epoxy

Packaging

Part A	15.8 kg containers
Part B	4.2 kg containers
Part A + B	20 kg ready to mix units
Part A	3 Drums 220 kg
Part B	1 Drum 177 kg
Part A + B	4 Drums 837 kg

Appearance / Colour

Resin - Part A Brownish-transparent, liquid
Hardener - Part B Transparent, liquid

Shelf life

24 months from date of production

Storage conditions

The packaging must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C.

Density

Part A	~1.6 kg/l
Part B	~1.0 kg/l
Mixed Resin	~1.4 kg/l

(DIN EN ISO 2811-1)

All density values at +23 °C

Solid content by weight ~100 %

Solid content by volume ~100 %

TECHNICAL INFORMATION

Shore D Hardness ~76 (7 d / +23 °C) (DIN 53 505)

Tensile Adhesion Strength > 1.5 N/mm² (failure in concrete) (ISO 4624)

Thermal Resistance	Exposure*	Dry heat
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	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 (steam cleaning etc.).

*No simultaneous chemical and mechanical exposure and only in combination with Citychem systems as a broadcast system with approximately 3 - 4 mm thickness.

SYSTEM INFORMATION

Systems

Primer:

Low / medium porosity concrete: 1 - 2 x Rock Floor 166

Levelling mortar fine (surface roughness < 1 mm):
Primer:

1 - 2 x Rock Floor 166 Levelling mortar

Levelling mortar medium (surface roughness up to 2 mm):

Primer: 1 - 2 x Rock Floor 166 Levelling mortar

Intermediate layer (self-smoothing 1.5 to 3 mm):

Primer: 1 x Rock Floor 166 Levelling mortar: 1 x

Rock Floor 166

APPLICATION INFORMATION

Mixing ratio

Part A : Part B = 79 : 21 (by weight)

Ambient Air Temperature

+10 °C min. / +35 °C max.

Relative Air Humidity

80 % r.h. max.

Dew Point

Beware of condensation!

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

Note: Low temperatures and high humidity conditions increase the probability of blooming.

Substrate Temperature

+10 °C min. / +35 °C max.

Substrate Moisture Content

More than 6 % pbw moisture content using the meter (at the time of application).

Please note that the moisture content must be more than 4 % pbw when using the CM measurement or Oven-dry-method. Test method: meter, CM -measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).

Pot Life Temperature

Time
+10 °C ~50 min
+20 °C ~25 min
+30 °C ~15 min

Curing time

Before applying solvent free products on Rock Floor 166 allow:

Substrate temperature	Minimum	Maximum
+10 °C d	24 h	4
+20 °C d	12 h	2
+30 °C	8 h	24

Before applying solvent containing products on Rock Floor 166 allow:

Substrate temperature	Minimum	Maximum
+10 °C 6 d	36 h	
+20 °C 4 d	24 h	
+30 °C 2 d	16 h	

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

APPLICATION

INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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.

▪ 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 blow holes and voids must be fully exposed.

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

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

MIXING

Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 3 minutes until a uniform mix has been achieved.

When parts A and B have been mixed, add the quartz sand and if required the Extender T and mix for a further 2 minutes until a uniform mix has been achieved.

To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix.

Over mixing must be avoided to minimise air entrainment.

Mixing Tools

Rock Floor 166 must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

For the preparation of mortars use a forced action mixer of rotating pan, paddle or trough type. Free fall mixers should not be used.

APPLICATION

Prior to application, confirm substrate moisture content, relative humidity and dew point. If more than 4 % pbw moisture content, applied as a T.M.B. (temporary moisture barrier) system.

Primer

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

If necessary, apply two priming coats. Apply Rock Floor 166 by brush, roller or squeegee. Preferred application is by using a squeegee and then back rolling crosswise.

Levelling mortar

Rough surfaces need to be levelled first. Apply the levelling mortar by squeegee/trowel to the required thickness.

Intermediate layer

Rock Floor 166 is poured, spread evenly by means of a serrated trowel. Roll immediately in two

directions with spiked roller to ensure even thickness and if required broadcast with quartz sand, after about 15 minutes (at +20 °C) but before 30 minutes (at +20 °C), at first lightly and then to excess.

Bonding bridge

Apply Rock Floor 166 by brush, roller or squeegee. Preferred application is by using a squeegee and then back rolling crosswise.

CLEANING OF TOOLS

Clean all tools and application equipment with Thinner immediately after use.

Hardened and/or cured Material can only be removed mechanically

FURTHER DOCUMENTS

Substrate quality & Preparation

Please refer to Citychem Method Statement: "EVALUATION AND PREPARATION OF SURFACES FOR FLOORING SYSTEMS".

Application instructions

Please refer to Citychem Method Statement: "MIXING & APPLICATION OF FLOORING SYSTEMS".

LIMITATIONS

Do not apply Rock Floor 166 on substrates with rising moisture.

- Freshly applied Rock Floor 166 should be protected from damp, condensation and water for at least 24 hours.
- Practical trials should be carried out for mortar mixes to assess suitable aggregate grain size distribution.
- For external applications, apply on a falling temperature.

If applied during rising temperatures "pin holing" may occur from rising air.

- These pinholes can be closed after a soft grinding by applying a scratch coat of Rock Floor 166 mixed with approximately 3 % of Extender T.

Construction joints require pre-treatment.

Treat as follows:

Static Cracks: prefill and level with Citychem epoxy resin

Dynamic cracks: to be assessed and if necessary apply a stripe coat of elastomeric material or design as a movement joint

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

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.

Tools:

BASIS OF PRODUCT DATA

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

ECOLOGY, HEALTH AND SAFETY

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



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