Construction

Sikafloor®-155 WN

2-part water dispersed epoxy resin primer

Product Description

Solvent-free, water dispersed two part primer based on epoxy resin.

Uses

As a primer and adhesion promoter on properly prepared:

- New concrete
- Cementitious screeds
- Hardened concrete
- Existing epoxy floor coatings
- EpoCem levelling layers

As a primer for:

- Sikafloor®-81 EpoCem® and Sikafloor®-82 EpoCem®
- Sikafloor® -20 PurCem® and Sikafloor® -21 PurCem®
- Sikafloor®-Level®-25

Characteristics / Advantages

- Easy and fast to apply
- Especially suitable for highly absorbent substrates
- Water dispersed and odourless
- Can be applied in unventilated areas
- Longer pot life than Sikafloor®-155 W
- Very good bond strength over its whole application temperature range
- Environmentally friendly

Tests

Approval / Standards

All values indicated below are internal test results according to DIN 52615 and EN 13892-8.

Conforms to the requirements of EN - 13813 SR - B 1.5

Product Data

Form

Appearance / Colours

Part A:	thick coloured paste
Part B:	light yellow translucent emulsion
Mixed resin :	Oxide red (~ RAL 3009)

Packaging

Part A:	7.5 kg or 22.5 kg metal drum
Part B:	2.5 kg or 7.5 kg plastic jerrycan
Part A+B :	10 kg ready to mix units 30 kg ready to mix units

Storage

Storage Conditions/ Shelf-Life	12 months from date of production if stored properly in original, unopened and undamaged, sealed containers, in dry conditions, at temperatures between +5ºC and +25ºC. Protect from frost.

Technical Data

Chemical Base	Water dispersed epoxy
Density	Part A: ~ 1.6 kg/l (at +20°C) Part B: ~ 1.1 kg/l " Mixed resin: ~ 1.4 kg/l "
Solid Content	~ 56% (by volume) / ~ 70% (by weight)
Viscosity	4900 mPa.s (+20°C) Contraves (RM 180 Rheomat)
Layer Thickness	D.F.T.: ~ 110 - 180 µm per coat
Water Vapour Diffusion Coefficient (μH_2O)	$\mu H_20 \approx 2763$ (DIN 52615) Equivalent air layer thickness for 1 mm thickness: Sd ≈ 0.27 m

Mechanical / Physical Properties

Bond Strength	After 28 days at +23°C / 50% r.h. (EN 13892-8) *Hardened concrete:* C35 Concrete according to UNE-EN 1766 | > 1.5 N/mm^2 concrete failure (1.5 N/mm^2 is the minimum pull off strength of the recommended concrete substrate).

System Information

System Structure	1 - 2 coats (dependent on substrate porosity).

Application Details

Consumption / Dosage	0.3 - 0.5 kg/m^2/coat. (2 - 3.3 m^2/kg/coat). Sikafloor®-155 WN, diluted with water 10% by weight for the first coat. Undiluted for the second coat. This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variation in level or wastage, etc.
Substrate Quality	The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2. The substrate can be damp but must be free of standing water (no puddles!) and be free of all contaminants such as oils, grease, coatings and surface treatments etc.
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 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 Sikafloor®, Sikadur® and Sikagard® range of materials. High spots can be removed by 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. / +35°C max.
Ambient Temperature	+10°C min. / +35°C max.
Substrate Moisture Content	Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method. Always confirm substrate moisture content prior to the application of the primer. < 4% for impervious resin finishes. No rising moisture according to ASTM D 4263 test (Polyethylene sheet). < 6% for Sikafloor® EpoCem® range, Sikafloor® PurCem® range and for Sikafloor®-Level®-25 (with vapour permeable finish) or other products in the Sikafloor®-Level® range. Can be applied on matt - damp green concrete when overcoating with the Sikafloor® EpoCem® range.
Relative Air Humidity	85% r.h. max.
Dew Point	Beware of condensation! The substrate and uncured floor must be at least 3ºC above dew point to reduce the risk of condensation or blooming on the surface of the applied product.

Application Instructions

Mixing	Part A : B = 3 : 1 by weight
Mixing Time	Prior to mixing, thoroughly stir part A (resin) well, then add all of part B (hardener) and mix both liquid parts thoroughly for one minute until a uniform mix has been achieved. When parts A and B have been mixed for one minute for the first coat, slowly add 10% of clean water while mixing continues for a further two minutes, until a fully homogenous mix has been achieved. For the second coat, do not add additional water, but continue the mixing for a total of 3 minutes until a fully homogenous mix has been achieved. To ensure thorough mixing of both coats, after the minimum 3 minutes mixing, pour the mixed material into another container carefully scraping the sides and mixing paddle with a spatula and then mix again briefly to ensure complete and thorough mixing. Excessive mixing must also be avoided to minimise air entrainment.
Mixing Tools	Low speed electric stirrer(~ 300 - 400 rpm)
Application Method / Tools	Apply Sikafloor®-155 WN by suitable brush, roller or trowel and overwork with a roller. *Caution:* The end of the product's potlife is not noticeable! Keep within the limitations mentioned below. Discard material not used within these times.
Cleaning of Tools	Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed mechanically.

Potlife

Temperature	Time
+10°C	~ 180 minutes
+20°C	~ 90 minutes
+30°C	~ 45 minutes

Caution: expiry of potlife without visible change. (Above values at 75% r.h.)

Waiting Time / Overcoating

Before applying Sikafloor®-81 / -82 EpoCem® onto Sikafloor®-155 WN allow:

	Waiting time	
Substrate temperature	Minimum	Maximum
+10 °C	12 hours	24 hours
+20 °C	6 hours	12 hours
+30 °C	4 hours	6 hours

At low temperatures and / or high humidity curing time will increase.
Apply subsequent coats only to tack free primer.

For use as a tack coat when priming for Sikafloor®-Level®-25 without blinding with quartz sand, allow:

	Waiting time	
Substrate temperature	Minimum	Maximum
+10 °C	5 hours	8 hours
+20 °C	2.5 hours	4 hours
+30 °C	1 hour	2 hours

For use as a primer for the Sikafloor®-Level® or Sikafloor®-PurCem® range with full blinding with sand, allow:

	Waiting time	
Substrate temperature	Minimum	Maximum
+10 °C	24 hours	Not applicable
+20 °C	12 hours	Not applicable
+30 °C	6 hours	Not applicable

Notes on Application / Limitations

At low temperatures and/or high humidity, the curing time will increase.

Protect application from rain / water while reaction and curing takes place.

Dilution of the first coat with 10% of water by weight helps improve bond on dense and only slightly absorbent substrates, as well as reducing the consumption of material on excessively porous substrates. When applying a second coat, always use it undiluted.

Make sure to monitor and control the pot life of the mix as the end of pot life is not visibly noticeable. Discard any material at the pot life limits indicated for the existing application conditions!

Curing Details

Applied Product ready for use

See the Overcoating table above.

Substrate temperature	Foot traffic
+10 °C	~ 12 hours
+20 °C	~ 6 hours
+30 °C	~ 4 hours

No specific additional curing measures are required.

All times are approximate and will be affected by changing ambient and substrate 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 should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

Construction

CE Labelling

The harmonized European Standard EN 13 813 „Screed material and floor screeds - Screed materials - Properties and requirements“ specifies requirements for screed materials for use in floor construction internally.

Structural screeds or coatings, i.e. those that contribute to the load bearing capacity of the structure, are excluded from this standard.

Resin floor systems as well as cementitious screeds fall under this specification. They have to be CE-labelled as per Annex ZA. 3, Tables ZA. 1.1 or 1.5 and Z.A. 3.3 and fulfil the requirements of the given mandate of the Construction Products Directive (89/106):

CE	
Sika Limited Watchmead Welwyn Garden City Hertfordshire AL7 1BQ United Kingdom	
06 [1)]	
EN 13813 SR - B 1.5	
Primer/Sealer (systems as per Product Data Sheet)	
Reaction to fire:	NPD [2)]
Release of corrosive substances (**S**ynthetic **R**esin Screed):	SR
Water permeability:	NPD
Abrasion **R**esistance:	NPD
Bond strength:	B 1.5
Impact **R**esistance:	NPD
Sound insulation:	NPD
Sound absorption:	NPD
Thermal resistance:	NPD
Chemical resistance:	NPD

[1)] Last two digits of the year in which the marking was affixed.

[2)] No performance determined

EU Regulation VOC - Decopaint Directive

According EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / Cat. J / Type wb) is, ready for use, 140 / 140 g/l (limit 2007/2010). The max. content of Sikafloor®-155 WN, ready for use, is < 140 g/l VOC.

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ISO 14001 ISO 9001