

Sikadur®-12 Pronto

2-part fast curing repair mortar based on reactive acrylic resins

Product Description	Sikadur®-12 Pronto is a fast curing, self smoothing two part resin mortar based on reactive acrylic resins.
Uses	<ul style="list-style-type: none">■ Fast curing multi purpose repair mortar for concrete roadways, runways, car park decks, industrial floors, stairs, precast concrete units etc.■ As a grout for bridge bearings, foundations and rails etc.■ For grouting of anchors and bolts etc.■ Filling of voids and cavities■ For application on concrete, stone, cement mortar and steel
Characteristics / Advantages	<ul style="list-style-type: none">■ Fast curing■ Can be applied at low temperatures■ Easy mixing and good workability■ High mechanical strengths■ Good abrasion and impact resistance■ Good chemical resistance
Test	
Approval / Standards	Fast curing repair mortar based on reactive acrylic resins according to EN 13813:2002, DoP 02 02 02 01 002 0 000002 2017
Product Data	
Form	
Appearance / Colours	Resin - part A: transparent, liquid Powder / Hardener - part B: grey, powder
Packaging	Part A: 2.75 kg containers Part B: 22.25 kg bags Part A+B: 25.00 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 packaging, in dry conditions at temperatures between +5°C and +30°C.

Construction



Technical Data

Chemical Base	Reactive acrylic resins		
Density	Part A: ~ 0.94 kg/l Part B: ~ 1.38 kg/l Mixed mortar: ~ 2.10 kg/l All Density values at +23°C.	(DIN EN ISO 2811-1)	
Thermal Expansion Coefficient	27 x 10 ⁻⁶ per °K		

Mechanical / Physical Properties

Compressive Strength	(EN-191-1)		
	3 hours	24 hours	10 d
-10°C	~ 50 - 60 N/mm ²	-	-
+5°C	~ 63 - 68 N/mm ²	~ 69 - 74 N/mm ²	~ 74 - 79 N/mm ²
+20°C	~ 65 - 70 N/mm ²	~ 70 - 75 N/mm ²	~ 75 - 80 N/mm ²

Flexural Strength	(EN-191-1)		
	3 hours	24 hours	10 d
-10°C	~ 12 - 15 N/mm ²	-	-
+5°C	~ 13 - 15 N/mm ²	~ 15 - 17 N/mm ²	~ 16 - 18 N/mm ²
+20°C	~ 15 - 17 N/mm ²	~ 17 - 19 N/mm ²	~ 18 - 20 N/mm ²

Bond Strength	> 1.5 N/mm ² (failure in concrete)	(ISO 4624)
E-Modulus	~ 12000 N/mm ² (static)	(DIN 1048-5)

Resistance

Chemical Resistance Resistant to many chemicals. Please ask for a detailed chemical resistance table.

Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C
Short-term max. 7d	+80°C
Short-term max. 12h	+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.

System Information

System Structure	<i>Repair mortar 5 - 30 mm:</i> Primer*: 1 x Sikafloor®-11 Pronto lightly broadcast with quartz sand 0.4 - 0.7 mm Mortar: 1 x Sikadur®-12 Pronto <i>Repair mortar 20 - 100 mm:</i> Primer: 1 x Sikafloor®-11 Pronto lightly broadcast with quartz sand 0.4 - 0.7 mm Mortar: 1 x Sikadur®-12 Pronto + kiln-dried quartz sand 2 - 7 mm Broadcast (for slip resistant surface) with quartz sand 0.4 - 0.7 mm *optional, recommended for thin layer applications of Sikadur®-12 Pronto.
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Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sikafloor®-11 Pronto broadcast quartz sand	0.30 - 0.50 kg/m ² 0.50 - 0.80 kg/m ²
Repair mortar 5 - 30 mm	Sikadur®-12 Pronto	2.1 kg/m ² /mm
Repair mortar 20 - 100 mm	2 pbw Sikadur®-12 Pronto + max. 1 pbw quartz sand mix: 1 pbw quartz sand 2 - 3 mm 1 pbw quartz sand 3 - 5 mm 5 pbw quartz sand 5 - 7 mm Broadcast quartz sand (if required)	2.1 kg/m ² /mm 0.5 - 0.8 kg/m ²

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.

Substrate Quality

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.

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.

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: Sika®-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 dew point to reduce the risk of condensation or blooming on the floor finish.

Application Instructions

Mixing

Part A : part B = 1 : 8 (by weight)

The mixing ratio can be varied, dependent on the required consistency.

Limitations: part A : part B = 1 : 7 to 1 : 11 (by weight).

At a mixing ratio of 1 : 7, Sikadur®-12 Pronto can be used as a pourable mortar.

Sikadur®-12 Pronto can be filled with quartz sand in a mixing ratio of 1 : 0.5.

Mixing Time

Mixing using the plastic bag:
 Pour required quantity of part A into the plastic bag. Tie up the plastic bag and mix thoroughly by hand. To pour out the mixed material, simply cut off a tip of the plastic bag.

Mixing using a mixing vessel:
 Pour the required quantity of part A into suitable mixing vessel. Slowly add powder component B whilst constantly stirring. Over mixing must be avoided to minimize air entrapment. By adding the powder component (and quartz sand if required) gradually the required consistency can be obtained.

Mixing Tools

A mixing bag for hand mixing is provided.

Sikadur®-12 Pronto must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

Application Method / Tools

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

Priming:
 Ensure that a continuous, pore free film covers the substrate. Apply the Sikafloor®-11 Pronto primer by brush or roller.

Repair mortar:
 Apply Sikadur®-12 Pronto with trowel, spatula etc. or press into place by hand (rubber gloves must be worn). Work the mortar well into the substrate. Begin at the centre of the area and work outwards towards the edges. Trowel the surface smooth until all pores are closed.

If a textured surface finish is required, the freshly trowelled mortar may be lightly broadcast with quartz sand.

Unfilled Sikadur®-12 Pronto must be applied by trowel in a finishing layer of 10 mm thickness if a dense, smooth surface is required.

Cleaning of Tools

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

Potlife

Temperature	-10°C	+5°C	+10°C	+20°C
Time	~ 60 minutes	~ 30 minutes	~ 20 minutes	~ 10 minutes

Waiting Time / Overcoating

Before applying Sikadur®-12 Pronto on Sikafloor®-11 Pronto allow:

Substrate Temperature	-10°C	+5°C	+10°C	+20°C
Time minimum	55 minutes	90 minutes	75 minutes	60 minutes
Time maximum	*	*	*	*

Before applying Sikadur®-12 Pronto on Sikadur®-12 Pronto allow:

Substrate Temperature	-10°C	+5°C	+10°C	+20°C
Time minimum	120 minutes	60 minutes	40 minutes	20 minutes
Time maximum	*	*	*	*

*No time limit, the Sikadur®-12 Pronto can be applied onto Sikafloor®-13 Pronto or Sikadur®-12 Pronto after thorough cleaning.

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

Notes on Application / Limitations

Do not apply Sikadur®-12 Pronto on substrates with rising moisture.

Freshly applied Sikadur®-12 Pronto should be protected from damp, condensation and water for at least 1 hour.

Use spark proof mixing equipment for internal applications.

Always ensure good ventilation when using Sikadur®-12 Pronto in a confined space.

In order to ensure optimum curing during internal applications the air must be exchanged at least seven times per hour. During application and curing use a forced fresh air supply/exhausting of fumes with appropriate equipment (explosion-proof).

Practical trials must be carried out for mortar mixes to assess suitable aggregate granulometry.

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

Min. layer thickness: 5 mm.

Since polymeric mortars will adhere to formwork, any formwork used must be generously coated with a suitable release agent.

Sikadur® resins are formulated to have low creep under permanent loading. However due to the creep behaviour of all polymer materials under load, the long term structural design load must account for creep. Generally the long term structural design load must be lower than 20-25% of the failure load. Please consult a structural engineer for load calculations for your specific application.

Curing Details**Applied Product ready for use**

	-10°C	+5°C	+10°C	+20°C
Light traffic	~ 120 minutes	~ 60 minutes	~ 40 minutes	~ 20 minutes
Full cure	~ 12 hours	~ 8 hours	~ 6 hours	~ 3 hours

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 Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's 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. Sika 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.

EU Regulation 2004/42 According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type **sb**) is 500 g/l (Limits 2010) for the ready to use product.

VOC - Decopaint Directive The maximum content of **Sikadur®-12 Pronto** is < 500 g/l VOC for the ready to use product.



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