BUILDING TRUST

BUILDING PRODUCT INFORMATION SHEET

Sikadur®-32 Normal

2-component structural epoxy bonding agent

DESCRIPTION

Sikadur®-32 Normal is a moisture tolerant, structural, two part bonding agent, based on a combination of epoxy resins and special fillers, designed for use at temperatures between +10 °C and +30 °C.

USES

Sikadur®-32 Normal is used as a structural bonding agent and adhesive for:

- Concrete elements
- Mortar, bricks, masonry
- Steel, iron, aluminium
- Polyester / fibreglass and epoxy resin materials

Typical applications for Sikadur®-32 Normal are:

- Bonding of new concrete screeds to existing floors
- Bonding of plaster toppings and overlays to existing substrates
- Bonding new concrete to old at construction joints
- Bonding of tile bedding mortars to existing substrates

FEATURES

Sikadur®-32 Normal has the following advantages:

- Easy to mix and apply
- Suitable for dry and damp concrete surfaces
- Very good adhesion to most construction materials
- High bond strength
- Hardens without shrinkage
- Different coloured components (for mixing control)
- No primer needed
- High initial and ultimate mechanical strength
- Impermeable to liquids and water vapour
- Good chemical resistance

APPROVALS / CERTIFICATES

Structural bonding agent tested according to EN 1504-4, provided with the CE-mark

PRODUCT INFORMATION

Product identifier	Sikadur®-32 Normal
Place of manufacture	Aotearoa New Zealand
Composition	Epoxy resin
Packaging	3 litre unit and 18 litre unit. (Refer to Sikadur®-32+ for a 1kg unit)
Shelf life	24 months from date of production
Storage conditions	Store in original, unopened, sealed and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight.
Colour	Component A: white Component B: dark grey Components A+B mixed: light grey
Density	1.4 ± 0.1 kg/l (component A+B mixed) (at +23 °C)

TECHNICAL INFORMATION

Compressive strength

Curing time	Curing temperature		
	+10 °C	+23 °C	+30 °C
1 day	-	~24 N/mm²	~30 N/mm²
3 days	~13 N/mm²	~28 N/mm²	~41 N/mm²
7 days	~32 N/mm²	~39 N/mm²	~52 N/mm²
14 days	~42 N/mm²	~49 N/mm²	~56 N/mm²

Compressive strength at 4 % elongation

Modulus of elasticity in compression

~ 3 250 N/mm² (14 days at +23 °C) (ASTM D 695-95)

Flexural strength

Curing time	Curing temperature		
	+10 °C	+23 °C	+30 °C
1 day	-	~29 N/mm²	~52 N/mm²
3 days	~12 N/mm²	~48 N/mm²	~57 N/mm²
7 days	~24 N/mm²	~50 N/mm²	~60 N/mm²
14 days	~42 N/mm²	~56 N/mm²	~65 N/mm²

Modulus of elasticity in flexure

~ 3 600 N/mm² (14 days at +23 °C) (DIN EN ISO 178)

Tensile strength

Curing time	Curing temperature		
	+10 °C	+23 °C	+30 °C
1 day	-	~16 N/mm²	~24 N/mm²
3 days	-	~25 N/mm²	~30 N/mm²
7 days	~20 N/mm²	~32 N/mm²	~33 N/mm²
14 days	~25 N/mm²	~33 N/mm²	~34 N/mm²

Modulus of elasticity in tension

~ 4 000 N/mm² (14 days at +23 °C) (ISO 527)

Tensile strain at break

1.0 ± 0.1 % (14 days at +23 °C) (ISO 527)

Tensile adhesion strength

Curing time	Substrate	Curing temperature	Adhesion strength
7 days	Concrete dry	+10 °C	> 3 N/mm² *
7 days	Concrete moist	+10 °C	> 3 N/mm² *
1 day	Steel	+10 °C	~8 N/mm²
3 days	Steel	+10 °C	~12 N/mm²
3 days	Steel	+23 °C	~13 N/mm²
3 days	Steel	+30 °C	~15 N/mm²

*100% concrete failure

Shrinkage

Hardens without shrinkage. (replace with 66912236555)

Coefficient of thermal expansion

8.2 × 10^{-5} 1/K (Temperature range +23 °C - +60 °C) (EN 1770)

Heat deflection temperature

Curing time	Curing temperature	HDT
7 days	+23 °C	+46 °C

(thickness 10 mm)

APPLICATION INFORMATION

Mixing ratio

Component A : component B = 2 : 1 by weight or volume

Consumption	The consumption of Sikadur®-32 Normal is ~ 1.3 kg/m² per mm of thickness.	
Layer thickness	~ 1 mm max.	
Sag flow	On vertical surfaces it is non-sag up to ~ 1 mm thickness.	(EN 1799)
Product temperature	Sikadur®-32 Normal must be applied at temperatures between +10 °C and +30 °C.	
Ambient air temperature	+10 °C min. / +30 °C max.	
Dew point	Beware of condensation.Substrate temperature during application must be at least 3 °C above dew point.	
Substrate temperature	+10 °C min. / +30 °C max.	

Pot Life

Temperature	Potlife*	Open time
+10 °C	~ 145 minutes	–
+23 °C	~ 55 minutes	~ 120 minutes
+30 °C	~ 35 minutes	~ 60 minutes

*200 g

The potlife begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the potlife. To obtain longer workability at high temperatures, the mixed adhesive may be divided into portions. Another method is to chill components A+B before mixing them (not below +5 °C).

MANUFACTURER AND IMPORTER INFORMATION

Manufacturer information

Address	Sika (NZ) Limited 85-91 Patiki Road Avondale, Auckland 1026 New Zealand
Phone number	0800 745 269
Website	https://nzl.sika.com/
Email address	info@nz.sika.com
NZBN	9429000018791

BUILDING CODE INFORMATION

Building Code clauses

B1 Structure: Performance clauses B1.3.1, B1.3.2, B1.3.3 (a ,b, j, q), B1.3.4

B2 Durability: Performance clause B2.3.1-(a) not less than 50 years

F2 Hazardous Building Materials: Performance clause F2.3.1

Building Code compliance statements

Performance B1.3.1, B1.3.2, B1.3.3 (a, b, j, q) B1.3.4: When used as an adhesive this product contributes to meeting the loading requirements that bonded lining elements are subjected to, as a result of self-weight, imposed in-use gravity loading, impact, and the effects of creep and shrinkage over time.

Performance B2.3.1 (a) 50 years: This product has been evaluated in accordance with B2/VM1. It meets this durability requirement and will remain serviceable for 50 years, or more, when installed and maintained in accordance with the relevant Sika technical literature. nzl.sika.com. According to Sika's "Service Improvement" records, maintained within its ISO9001:2015 Quality Management System, this product has performed successfully since it was introduced in 1998.

Performance F2.3.1: This product meets this requirement when used and applied in accordance with Sika's installation instructions and does not present a health hazard to people occupying or using the building. Refer to the Sika Product Technical Data sheet and product Safety Data Sheet nzl.sika.com for further information if required

BASIS OF PRODUCT DATA

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

IMPORTANT CONSIDERATIONS

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 the specific application.

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.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

- Hardened mortar and concrete must be older than 28 days (depending on any minimal strength requirements).
- Verify the substrate strength by testing (concrete, masonry, natural stone).
- The substrate surface (all types) must be clean, dry or mat damp (no standing water) and free from contaminants such as dirt, oil, grease, existing surface treatments and coatings etc.
- Steel substrates must be de-rusted to a condition similar to Sa 2.5.
- The substrate must be sound and all loose or friable particles must be removed.

SUBSTRATE PREPARATION

Concrete, mortar, stone and brick Concrete and other hardened mineral substrates must be prepared by suitable means such as high pressure water jetting and / or blast cleaning, in order to obtain surfaces that are sound, clean, dry or mat damp (no standing water) and free from any cement laitance, ice, grease, oils, old coatings or other surface treatments. Any loose or friable particles must also be removed to achieve a contaminant free and open textured surface.**Steel**Steel surfaces must be cleaned and prepared thoroughly to the acceptable quality standard equivalent to Sa 2.5 i.e. normally by blast cleaning and then removing any dust by vacuum. Avoid dew point conditions.

MIXING

Pre batched units:Mix components A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (max. 300 rpm) until the material becomes smooth in consistency and a uniform grey colour. Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for approx. 1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within its potlife.

CLEANING OF EQUIPMENT

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

APPLICATION

Apply the mixed Sikadur®-32 Normal to the prepared surface by brush, roller, spray or with a trowel, and ensure uniform and complete coverage. On hardened concrete substrates mechanically prepared to receive fresh concrete, always apply by brush and work the material well into the substrate.Place the fresh concrete whilst the Sikadur®-32 Normal layer is still 'tacky'. If the material becomes glossy and loses tackiness, apply a fresh coat with additional Sikadur®-32 Normal and proceed.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

LEGAL NOTES

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