BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-32 N

2-part structural epoxy bonding agent

DESCRIPTION

Sikadur®-32 N 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

As a structural bonding agent and adhesive for:
- Concrete elements (including bonding fresh to hardened concrete)
- Hard natural stone
- Ceramics, fibre-cement
- Mortar, Bricks, Masonry
- Steel, Iron, Aluminium
- Wood
- Polyester / fibreglass and Epoxy resin materials
- Glass

CHARACTERISTICS / ADVANTAGES

Sikadur®-32 N 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

PRODUCT INFORMATION

Chemical Base	Epoxy resin	
Packaging	1.0ltr (A+B) or 1.32kg	Pre-batched kits
	Component A	0.65ltr or 0.86kg
	Component B	0.35ltr or 0.46kg
	5.0ltr (A+B) or 6.6kg	Pre-batched kits
	Component A	3,25ltr or 4.3kg
	Component B	1.75ltr or 2.3kg
Colour	Part A	white
	Part B	dark grey
	Part A+B mixed	concrete grey
Shelf Life	24 months from date of production	
Storage Conditions	Store in properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +5°C and +30°C. Protect from direct sunshine.	

Density	Part A	1.32g/cm3	(DIN EN ISO 2811-1)
	Part B	1.30g/cm3	

TECHNICAL INFORMATION

Compressive Strength (ASTM D695-95)

Curing time	+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

Modulus of Elasticity in Compression ~ 3'250 N/mm2 (14 days at +23°C) (ASTM D695-95)

Modulus of Elasticity in Flexure ~ 3'600 N/mm² (14 days at +23°C) (DIN EN 53452)

Tensile Strength (ISO 527)

Curing time	+10°C	+23°C	+30°C
1 days		~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)

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

Tensile Adhesion Strength (EN ISO 4624) (EN 1542) (EN 12188)

Time	Temp	Substrate	Bond Strength
7 days	+10°C	Concrete dry	>3 N/mm²
7 days	+10°C	Concrete moist	>3 N/mm²
1 days	+10°C	Steel	6-10 N/mm²
3 days	+10°C	Steel	10-14 N/mm²
3 days	+23°C	Steel	11-15 N/mm²
3 days	+30°C	Steel	13-17 N/mm²

Shrinkage Hardens without shrinkage

Coefficient of Thermal Expansion Coefficient W: (EN1770)
8.2 x 10-5 per °C (Temp. range +23°C - +60°C)

Heat Deflection Temperature HDT = +46°C (7 days / +23°C) (ISO 75) (thickness 10mm)

APPLICATION INFORMATION

Mixing Ratio Part A : part B = 2 : 1 by weight or volume

Consumption The consumption of Sikadur®-32 N is ~ 0.9 – 1.0 ltr/m² per mm of thickness.

Sag Flow On vertical surfaces it is non-sag up to ~ 1 mm thickness. (EN 1799)

Product Temperature Sikadur®-32 N 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 and dew point conditions!
Substrate temperature during application must be at least 3°C above dew point

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

Substrate Moisture Content Can be applied to mat damp concrete. In these situations apply by brush and work the material well into the substrate.

Pot Life Pot-life (200 g)

+10°C	+23°C	+30°C	(ISO 9514)
~ 145 minutes	~ 55 minutes	~ 35 minutes	

The pot-life 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 pot-life. To obtain longer workability at high temperatures, the mixed Sikadur®-32 N may be divided into portions. Another method is to chill parts A+B before mixing them (not below +5°C).

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Hardened mortar and concrete must be older than 28 days (dependening on any minimal strength requirements).
Verify the substrate strength by testing (concrete, masonry, natural stone).
The substrate surface (all types) must be clean, dry 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 substrates.:
Concrete and other hardened mineral substrates must be prepared by suitable means such as high pressure water jetting and / or blastcleaning, in order to obtain surfaces that are sound, clean, dry and free from any cement laitance, ice, standing water, 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 substrates:
Steel surfaces must be cleaned and prepared thoroughly to the acceptable quality standard equivalent to Sa 2.5 i.e. normally by blastcleaning and then removing any dust by vacuum. Avoid dew point conditions.

MIXING

Pre batched units:
Mix parts 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.

APPLICATION METHOD / TOOLS

Apply the mixed Sikadur®-32 N 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 N layer is still 'tacky'. If the material becomes glossy and loses tackiness, apply a fresh coat with additional Sikadur®-32 N and proceed.

CLEANING OF TOOLS

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

LIMITATIONS

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.

BASIS OF PRODUCT DATA

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.

ECOLOGY HEALTH AND SAFETY

LEGAL NOTES

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