

Product Data Sheet
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Sikadur®-31 C

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2-part epoxy adhesive for Sikadur®-Combiflex® System

Product Description Sikadur®-31 C is solvent-free, thixotropic two part epoxy based adhesive for bonding Sikadur®-Combiflex® tape or Sikadur®-Hypalon strip to different substrates.

Uses ■ As adhesive for the Sikadur®-Combiflex® System

Characteristics / Advantages

- Easy to mix and apply
- Suitable for both dry and damp concrete surfaces
- Excellent adhesion to many materials
- Solvent free
- Performs well within a wide temperature range
- Completely weather and water resistant
- Fast curing
- Root resistant
- Good resistance to many chemicals
- Thixotropic – suitable for over head and vertical applications
- No primer needed
- High mechanical resistance
- Good abrasion resistance

Tests

Approval / Standards Central Food Technology Research Institute (CFTRI), Mysore
Conforms to: IS 9845 for food grade (compatibility with drinking water)

Packaging Part A : 4.00 kg container x 2
Part B : 2.00 kg container x 2

Part (A+B) : 6.00 kg container x 2 ready to mix units

Product Data

Form

Colours Part A: white
Part B: black
Part A+B mixed: grey

Storage

Storage Conditions / Shelf Life 12 months from date of production if stored properly in unopened undamaged and sealed original packaging in cool and dry conditions at temperatures between +5°C and +40°C.

Technical Data

Chemical Base Modified, solvent free, fillerised 2-part epoxy resin

Construction



Density	Part A : 1.70 kg/l (at +27°C) Part B: 1.90 kg/l (at +27°C) Part (A+B): 1.75 kg/l (at +27°C)
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Service Temperature	-30°C to +50°C
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Mechanical / Physical Properties

Bond Strength

Substrate	Bond strength
Concrete (dry)	> 1.5 N/mm ² (failure in concrete)
Concrete (mat / damp)	> 1.5 N/mm ² (failure in concrete)

Strength Development

Curing Time	Compressive Strength
1 day	45 N/mm ²
7 days	48 N/mm ²

Resistance

Chemical Resistance	<p><i>Sikadur®-Combiflex® System (Sikadur®-Combiflex® Tape or Sikadur®-Hypalon Strip glued with Sikadur®-Combiflex® Adhesive, Sikadur®-31C)</i></p> <p>Long term to: Water, lime water, cement water, seawater, salt solutions, domestic sewage, bitumen, bitumen emulsion coatings etc.</p> <p>Temporary to: Light fuel oil, diesel, diluted alkali and mineral acids, ethanol, methanol, petrol etc.</p> <p>These chemical resistance indications may be used to determine the suitability of the sealing system. Regarding specific short term chemical resistance, please consult our technical service departments.</p>
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System Information

Application Details

Consumption	Sikadur®-Combiflex® Adhesive per metre length		
	Strip width	Strip thickness	Adhesive consumption*
	10 cm	1 mm	~ 0.7 kg/m
	15 cm	1 mm	~ 1.0 kg/m
	20 cm	1 mm	~ 1.2 kg/m
	10 cm	2 mm	~ 0.8 kg/m
	15 cm	2 mm	~ 1.1 kg/m
	20 cm	2 mm	~ 1.4 kg/m
	25 cm	2 mm	~ 1.7 kg/m
	30 cm	2 mm	~ 2.0 kg/m

*The consumption can vary dependent on site conditions (surface roughness, size of aggregate etc.). Wastage of 10% due to handling and mixing will be extra on the above values.

Substrate Quality	<p><i>Concrete, stone, mortar, rendering:</i> Substrate must be clean, free from oil, grease, laitance or loose particles. Age of concrete 3-6 weeks dependent on environmental conditions.</p> <p><i>Construction Steel 37, V2A-Steel (WN 1.4301):</i> Clean, free from oil, grease, rust and scale.</p>
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Substrate Preparation	<p><i>Concrete, stone, mortar, rendering:</i></p> <ul style="list-style-type: none"> - Blastcleaning or equivalent mechanical means followed by thorough vacuum/dust removal. <p><i>Construction Steel 37:</i></p> <ul style="list-style-type: none"> - Blastcleaning or equivalent mechanical means followed by thorough vacuum/dust removal. - Avoid dew point conditions for application. <p><i>V2A-Steel (WN 1.4301):</i></p> <ul style="list-style-type: none"> - Light grinding followed by thorough vacuum/dust removal. - Avoid dew point conditions for application.
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Application Conditions / Limitations

Substrate Temperature	+10°C min to +40°C max
Ambient Temperature	+10°C min to +40°C max
Substrate Moisture Content	Cementitious substrates: Dry, max. mat damp (surface dry) When applied to mat damp concrete, brush the adhesive well into the substrate.
Relative Air Humidity	85% max. (at +25°C)
Dew Point	Avoid condensation.

Application Instructions

Mixing	<p>Part A : Part B = 2 : 1 (by weight)</p> <p>Pre-batched units: Mix parts A+B together for at least 2 minutes with a mixing spindle attached to a slow speed electric drill (max. 500 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.</p>
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Application Method / Tools	Apply the mixed product by hard brush or trowel (for detailed application, please consult Sikadur [®] -Combiflex [®] System product data sheet).
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Cleaning of Tools	Clean all tools and application equipment with Sika [®] Colma Cleaner, xylene, toluene etc. immediately after use. Hardened/cured material can only be mechanically removed.
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Potlife	(According to ASTM D 2471)	
	Temperature	Sikadur [®] -31 C
	+27°C	~ 35 minutes
If larger quantities are being mixed the temperature of Sikadur [®] -31C will increase due to the exothermic chemical reaction, resulting in a reduced potlife.		

Waiting Time / Overcoating	Sikadur®-Combiflex® Adhesive may be overcoated with an epoxy coating. In this event do not smooth the adhesive with detergent. If waiting time between application of adhesive and overcoating is to be longer than 2 days, the adhesive must be blinded to excess with quartz sand immediately after application.
Notes on Application / Limitations	Please consult the Sikadur®-Combiflex® System product data sheet.
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.
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.



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