

CIKObond DS-SEG Smart Chemical Solutions



Epoxy based adhesive for Segmental Construction

Description

CIKObond DS-SEG is a two component thixotropic epoxy based adhesive for bonding similar and dissimilar materials such as concrete precast items, segmental concrete items, stones, wood, , steel and many more subjected to high loads. It provides excellent adhesion to vertical and horizontal substrates.

CIKObond DS-SEG is a blend of premium quality epoxy cured with a special grade of hardener and reinforced with proper fillers. It offers good adhesion to almost any type of materials. CIKObond DS-SEG is supplied in two versions depending on ambient and surface temperature as below table:

Version	Ambient Temperature	Surface Temperature
CIKObond DS-SEG-1	10 to 30 °C	10 to 30°C
CIKObond DS-SEG-2	30 to 50 °C	30 to 50°C

Properties

- Two component epoxy based thixotropic structural adhesive.
- Easy to mix and apply, non-sag, no loss of bond due to sagging.
- Exhibits excellent bond strength, no creep.
- Moisture tolerant can be applied to slightly damp surface free of standing water.
- Suitable for wide range of applications and long open time even at high temperatures.
- Exhibits good squeezing properties suitable for effective spreading and contact.

Application area

- CIKObond DS-SEG as a binder is suitable for both industrial and commercial segments such as
- Bonding precast Bridge elements.
 - Bonding external steel reinforcement plates for strengthening beams, slabs and columns.
 - Anchoring bolts, dowels, steel bars in concrete

- Repair of precast concrete units.
- Dowel bar anchoring, fixing cat's eye and road studs on asphalt pavements.
- Fixing and filling precast stairs
- Filling gaps in concrete structures.

Physical Properties

	CIKObond DS-SEG1	CIKObond DS-SEG2
Form	Thixotropy Paste	
Colour	Matching Precast Concrete after proper mixing	
Mixed Density(Kg/L)	1.74±0.01	
Mixing Ratio by weight (A:B)	(100:50)	
Initial Cure	1 day	
Final Cure	7 days	
Non sag vertical thickness	3mm	
Pot Life	>60 mins @ 10°C	>50 mins @ 30°C
	>50 mins @ 20°C	>40 mins @ 40°C
	>40 mins @ 30°C	>30 mins @ 50°C
VOC (EPA 24)	<20g/l	
Compressive Strength	>60 Mpa @ 1 day (@10°C)	>60 Mpa @ 1 day (@30°C)
	>75 Mpa @ 7 days (@10°C)	>75 Mpa @ 7 days (@30°C)
Open Time	>90 mins @ 10°C	>80 mins @ 30°C
	>80 mins @ 20°C	>70 mins @ 40°C
	>60 mins @ 30°C	>60 mins @ 50°C
Tensile Bond Strength to Concrete	>3 MPa @ 1 day (@10°C)	>3 MPa @ 1 day (@30°C)
	>7 MPa @ 7 days (@10°C)	>7 MPa @ 7 days (@30°C)
Slant shear Bond Strength ASTM C-881	>10 Mpa @ 1 day (@ 10°C)	>10 Mpa @ 1day (@30°C)
	>12 Mpa @ 7 days (@ 10°C)	>12 Mpa @ 7 days (@30°C)

Coverage

A 12.0 kg kit of CIKObond DS-SEG will provide coverage of 7 m² at 1mm thickness.

In general the coverage depends on kind of application and type and condition of substrate. Consult CIKO technical service department for further guidance.

Application instructions

Surface preparation

The substrate surface should be free from dust and loose particles. All contamination should be treated well before the application of CIKObond DS-SEG.

Mixing

The base [Part-A] and hardener [Part-B] components of CIKObond DS-SEG should be mixed thoroughly using a Heavy duty slow speed drill paddle assembly for 2 – 3 minutes so as to achieve a homogenous mix.

Application

Properly mixed materials should be spread or filled over the cleaned surface using notched trowel or a suitable tool as per the requirement demands. The two items shall be pressed firmly/squeezed together within the open time of the adhesive depending on prevailing ambient temperature and the version used. Excess of materials shall be removed. A mechanical support is required especially for bonding metal plates. For segmental precast bonding, the surfaces must be brought into contact as soon as possible within the open time of material its version relatively to the ambient temperature. The compression must be kept sufficiently at the required strength.

Packaging

CIKObond DS-SEG is packed in 6.0 kg (3.5 L) and 12kg (7L) kits consisting of Part A & B.

Shelf life

CIKObond DS-SEG has a shelf life of 12 month if stored in unopened cans and in accordance with the mentioned storage conditions.

Storage

CIKObond DS-SEG should be stored under enclosed shaded area at temperatures between 10 – 35°C.

Precautions

CIKObond DS-SEG should not be applied at temperatures below 10°C and shall not be diluted with any solvent.

Health & safety

CIKObond DS-SEG should not come in contact with eyes or to be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Applicator should wear appropriate clothes, gloves and goggles. Use of barrier cream is recommended to provide additional skin protection. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice. Refer Material Safety Data Sheet for further details.

Technical Support

For any technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off site services to end users, specifier and contractors.

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- Waterproofing and damp proof coatings
- Surface treatments
- Flooring and toppings
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- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries