CIKOjoint PU50

Two components Polyurethane based joint and calk sealant

Description

CIKOjoint PU 50 is two-components polyurethane based joint sealant for horizontal and vertical applications for expansion and contraction joints as well as for calking and glazing in buildings and other structures. The cured material provides highly elastomeric property which exhibits a total movement accommodation of 25%.

CIKOjoint PU 50 base is polyurethane resin reinforced with suitable agents cured with special hardener and extenders to form an elastomeric solid seal capable of resistance against water, wind and dirt.

CIKOjoint PU 50 is designed for traffic application purposes and available in both self-levelling (pouring grade) and non-sag (gun grade) types.

Advantages & Properties

- Cold applied two components system.
- Available in both types self-levelling (pouring grade) and Non-sag (gun grade) consistency.
- Durable, Accommodates compression-extension cyclic movement of plus minus 25% of the nominal half joint width.
- Exhibits good UV resistance and permanent heat resistance of 70°C and occasional heat resistance up to 90°C.
- Provides excellent bond strength over a wide range of porous and non-porous substrates.
- Good chemical resistance against mild acids, hydroxides, and hydrocarbons.
- Available in wide range of colours.

Application Area & Uses

CIKOjoint PU 50 is a high-quality joint and calk sealant suitable for several areas of use such as:

- Vehicular Traffic applications
- Expansion and contraction joints in buildings and structures.
- Concrete pre-cast claddings and panels.
- Industrial floors and basements.
- Joints on roofs, glazing and calking applications.
- Joints in pedestrian and vehicular traffic areas such as walkways, plazas, decks and parking garages.

Applicable Standards

CIKOjoint PU 50 complies with minimum performance requirements of:

- ASTM C-920 Type M, Grade NS & P, use T_1, Class 25
- TT-S-00227E, Type I and II, class B.

Application Instructions

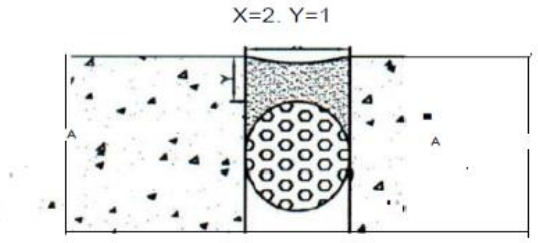
Surface preparation

Clean the joint substrate to make it free from all loose particles, dust, oil grease and any other form of contamination that might prevent adhesion. In case of oil spillage, proper chemical and mechanical treatment should be carried out to the surface. The joint must be dry, clean, free from dampness and standing water. Glass, stainless steel, aluminium and other metals must be degreased with alcohol based or MEK based solvents.

Placing backup rod and masking tape

Use closed cell polyethylene profiles, maintain a straight joint with proper edges that can receive a sealant having width to depth ratio of 2:1 accounting for the thickness of the backing rod

The depth of the sealant shall be maintained by properly placing the backup rod. Fix masking tape on upper face of the concrete or substrate.



Primer Application

Primer is not required, however for porous surfaces such as concrete and other alkaline surfaces prime using CIKOprimer PU which is a one component polyurethane primer. Apply the primer on the sides of the clean, dry joints using brush. Allow the primer to become tacky before applying joint sealant CIKOjoint PU50.

Mixing

The base component of CIKOjoint PU 50 should be mixed thoroughly using a heavy-duty slow speed drill fitted with paddle and ensure a homogenous mix. Then hardener component should be poured totally into the base component and mixed well for minimum 2 minutes until a homogenous mix is obtained.

Application method

Horizontal Joints – Pouring Grade

Properly mixed material can be directly poured into the primed joint and levelled to the surface of concrete. To remove bubbles generated during pouring, gently swipe the surface by using a thin flexible pad after 20-30 minutes of application.

Vertical Joints – Gun Grade

Properly mixed material shall be first filled inside sealant gun or filled using a putty knife or suitable tool, then the joints must be filled by triggering required amount sealant. The surface shall be levelled using spatula. Remove the masking tape gently.

Physical Properties & Chemical Characteristics

Criteria and Test Method	Results and specifications		
Form and Rheology	Viscous liquid or thixotropic/non sagging paste		
Curing Mechanism	Chemical Cure		
Density (ASTM D1475)	1.5 ± 0.02 kg/L (GG)		
	1.35 ± 0.02 Kg/L (PG)		
Tack free time	36-48 hours @ 25±2°C (GG and PG)		
Initial Curing time	72 hours @ 25±2°C (GG and PG)		
	48 hours @ 35±2°C (GG and PG)		
Final cure	7 days @ 25±2°C (GG and PG)		
	5 days @ 35±2°C (GG and PG)		
Pot life/working time	25-35 minutes @ 25±2°C (GG)		
	15-25 minutes @ 25±2°C (PG)		
Solid content (ASTM D2369)	98-100%		
Permanent Service temperature	-20°C up to 70°C		
Recommended ambient and substrate temperature during application	5°C up to 40°C		
Response to Thermal and Humid Aging (-30°C up to 90°C)	No physical sign of melting or crack were observed after test.	Change in Length	<0.5%
		Change in Width	<0.15%
		Change in Thickness	No change
		Change in Mass	<0.05%
Adhesion and cohesion under 25% cyclic movement ASTM C719 (Hockman Cycle)	Pass (No cracking and No adhesive failure)		
Width to depth ratio (W/D)	1:1 for joint width ranging from 5 up to 10mm		
	2:1 for joint width ranging from 10 mm up to 50 mm		
Shore A hardness @ 7 days (ASTM D2240)	50 ± 5 (GG and PG)		
Tensile Strength @ 7 days	≥ 1.5 MPa (GG and PG)		
Elongation at break @ 7 days (ASTM D412)	≥200% (GG) ≥150% (PG)		
Colours	Grey. Other colours depend upon request.		
VOC (USEPA-24)	<50 g/L		
Chemically resistant to occasional spillages of ammonium hydroxide, toluene, sodium hydroxide, petrol and gasoline.			

Packaging
CIKOjoint PU 50 (PG) is available in 4 litre kits consisting of Part A and Part B
CIKOjoint PU 50 (GG) is available in 2.5 litre kits consisting of Part A and Part B

Storage
CIKOjoint PU 50 should be stored under enclosed shaded area at temperatures between 5°C and 25°C away from direct sunlight, freeze, moisture and flammable materials.

Shelf life
CIKOjoint PU 50 has a shelf life of 6 months in unopened pails and if stored in accordance with manufacturer instructions.

Precautions
- Do not use over damp surface or standing water.
- The product is highly moisture tolerant, do not apply in conditions where relative humidity is recorded above 75%.
- Protect the applied sealant from any source of water, condensate, disturbance for at least 36 hours.

Health & safety
CIKOjoint PU 50 should not come in contact with eyes or 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 further technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and offsite services to end users, specifier and contractors.

More from CIKO Middle East
A wide range of construction chemical products are manufactured by CIKO Middle East which includes:
- *Concrete admixtures and additives*
- *Waterproofing and damp-proof coatings*
- *Surface treatments*
- *Flooring and toppings*
- *Grouts and anchors*
- *Tile adhesives and grout*
- *Concrete repair materials*
- *Adhesives and bonding agent*
- *Protective coating*
- *Joint Sealants and Moulding compounds*
- *Ancillaries*

ص . ب رقم : ٢٩٥ , الدوحة - قطر
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