

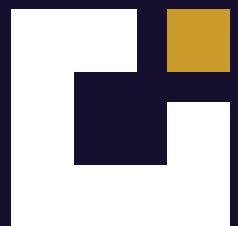
Carbolink's Solutions for :

# Adhesives & Sealants



## Adhesives & Sealants Product Specifications & Technical Data Sheets(TDS)

India's Most Preferred  
Construction Chemical Manufacturing Brand



Carbolink India Pvt. Ltd.

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## Carbolink India Pvt. Ltd. COMPANY PROFILE



For years, Carbolink India has been the Quality Leader in offering excellent Construction Chemical Products with Supreme Quality and Reliability.

Carbolink India Manufactures Industrial Flooring(Epoxy & PU Flooring), Decorative Flooring, 3D Flooring, Waterproofing Systems, corrosion protection, wood coatings, etc. which cater specifically to the Indian climate. With manufacturing facility in India, Carbolink India manufactures and supply Materials all through the country. Carbolink's commitment to customer service and technical support is the best. We work closely with architects, structural engineers, contractors and owners to best understand their requirements. Together we develop a best solution for a construction project, adding value and becoming more than just a materials supplier, but a solution provider.

With the support of our multinational manufacturing group, Carbolink India today has support centers across the country, strategically placed to provide consistent high standards of product and service.

### Our Product Range:

- Anti Corrosive Coatings
- Car Park Flooring
- Curing Compounds
- Decorative Flooring
- Floor Hardner
- Grouts & Anchors



- Industrial Flooring
- Repairing Compounds
- Sealants
- Sports Flooring
- Tiling Products
- Wood Coatings



## Adhesives & Sealants

The use of adhesives offers many advantages over binding techniques such as sewing, mechanical fastening, thermal bonding, etc. These include the ability to bind different materials together, to distribute stress more efficiently across the joint, the cost effectiveness of an easily mechanized process, an improvement in aesthetic design, and increased design flexibility. Adhesives are typically organized by the method of adhesion. These are then organized into reactive and non-reactive adhesives, which refers to whether the adhesive chemically reacts in order to harden. Alternatively they can be organized by whether the raw stock is of natural or synthetic origin, or by their starting physical phase.

Sealant is a substance used to block the passage of fluids through the surface or joints or openings in materials a type of mechanical seal. in building construction sealant is sometimes synonymous with caulking and also serve the purposes of blocking dust, sound and heat transmission. Sealants may be weak or strong, flexible or rigid, permanent or temporary. Sealants are not adhesives but some have adhesive qualities and are called adhesive-sealants or structural sealants.

Carbolink manufactures a full range of world class Adhesives & Sealants systems providing the most up-to-date technologies. Carbolink India is a leader in tailored Adhesives & Sealants Solutions.

Here is our Adhesives & Sealants range:

Product Name	Page no.
CLI PolySeal EP - 11C	4
CLI PolySeal P - 11	6
CLI PolySeal S - 11C	8
CLI PolySeal S - 12C	10
CLI SU 10	12



## **POLYSEAL EP - 11C**

### **2K Epoxy Modified Sealants**

#### **DESCRIPTION**

Polyseal EP - 11C is a two component, semi-rigid epoxy for filling control and construction joints in industrial concrete floors. This product supports the joint edges and reduces spalling of the edges caused by wheel traffic. Polyseal EP - 11C has been designed for use under ACI 302, Section 4.10 recommendations for epoxy joint fillers.

#### **ADVANTAGES**

- Semi-flexible formula that allows for limited temperature and humidity movement of concrete
- Tough performance reduces floor joint repairs and maintenance
- Suitable for filling cracks in older floors to reduce the rate of deterioration

#### **SPECIFICATIONS / COMPLIANCES**

Polyseal EP - 11C is a semi flexible joint filler designed to comply with ACI 302 recommendations regarding control and construction joints.

#### **APPLICATION**

- Concrete construction and control joints in industrial floors
- Crack filler repair for old floors.

#### **APPLICATION METHODOLOGY**

- Ensure that the groove to be treated is free from oil, grease, paints or any other contamination.
- Any dust or loose particles has to be removed by air pressure or by any other suitable method
- Grooves should be clean and dry prior to the application of Polyseal EP - 11C.
- Masking tape has to be applied near the edge of the groove to get a straight neat finish.
- Mix component A and Component B separately. If settling is observed in the Comp A and Comp B, loosen the settled material with the help of hand stirrer followed by power driven stirrer for quick homogenous mixing. Mix Comp B gradually into the Comp A under continuous stirring.
- After ensuring a homogenous mix, pour the mixed material into the groove.
- Joints should be overfilled and immediately cut with a razor knife or ground flush with the floor. If Polyseal EP - 11C has completely hardened, a heat flame may be used to soften the material for easier removal.
- Polyseal EP - 11C requires no special curing instructions. The product will cure within 24 hrs of placement @ 21 °C. Lower temperature will slow the curing rate

#### **CHARACTERISTICS**

Pot Life at 24 °C, minute	15
Compressive Strength, 72 hrs	210 kg/cm <sup>2</sup>
Elongation, 7 days	55 %
Water Absorption after 72 hrs immersion	1.1 %
Shore A Hardness	> 100
Tack free time @ 24 °C, hrs	12
Tensile Strength, 7 days	46 kg/cm <sup>2</sup>
Chemical Resistance after 72 hrs, 24 °C	
• CaCl <sub>2</sub> (10%)	Excellent
• Caustic (10%)	Excellent
• Muriatic Acid (10%)	Excellent

#### **CLEANING**

Tools, equipment and general clean-up can be done with Xylene or Toluene.

#### **LIMITATION**

- Based on ACI 302 recommendations, epoxy joint filler should be applied 3 to 6 months after construction, the later the better.
- Do not use Polyseal EP - 11C as an expansion joint sealant.
- Use only at temperature above 4 °C .
- Contact surfaces must be cleaned and dry .

**HEALTH & SAFETY**

- The product should not come in contact with the skin and eyes, or be swallowed.
- Ensure adequate ventilation and avoid inhalation of vapours as some people are sensitive to resins, hardeners and solvents.
- Wear suitable protective clothing, gloves and eye protection.
- In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately - do not induce vomiting.

**PACKING**

Available in 1 and half kg Unit contains both hardener and resin packed in 12 kg carton.

**STORAGE AND SHELF LIFE**

Keep in a cool and dry place under shed away from heat. The shelf life of product is 12 Months in original unopened sealed condition.

**CONDITIONS OF SALE**

Sold subject to the Company's conditions of sale which are available on request.

**NOTE**

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# **POLYSEAL P - 11**

## **Two Component Primer For Polysulphide / Polyurethane Sealants**

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### **DESCRIPTION**

PolySeal P - 11 is a two component epoxy system with adhesion promoting ingredients. The low viscosity primer facilitates proper bonding of sealants with concrete, steel surface, aluminium and glass.

### **ADVANTAGES**

- Low viscosity and easy to apply
- High penetration to concrete surface
- High wetting property for non porous surface

### **APPLICATION**

- Concrete joints
- Aluminium / steel to concrete gaps
- Glass -Aluminium cavity

### **APPLICATION METHODOLOGY**

- Ensure that the surface is sound, free from dust, laitance and other contaminants.
- Ensure thorough surface preparation, preferably by mechanically scarifying, grit / sand blasting, and removing of all laitance, loose particles and contaminants.
- Remove oil / grease etc by using 60 grit sand paper and roughen the surface to a 3 - 4 mill profile. Mechanical method may also be followed.
- Add the entire contents of the Component B to Component A and mix thoroughly for 3 minutes using a slow speed drill ( 400 - 500 rpm) fitted with a suitable mixing paddle till homogeneous mix is achieved,
- Apply the mix onto the surface using a brush or roller.
- Allow it to dry for 30 minutes, when tacky, apply Sealant – Polysulphide or Polyurethane - on the primed surface.
- If the sealant is not applied on the primed surface (while primed surface is tack free), re-prime is mandatory before use the sealant.

### **CHARACTERSTICS**

Colour

- |               |             |
|---------------|-------------|
| • Component A | Clear       |
| • Component B | Light Brown |

Mixing Ratio	1:1
--------------	-----

Application Temperature, °C	10 - 50
-----------------------------	---------

Theoretical Coverage, m<sup>2</sup>/L

- |                       |    |
|-----------------------|----|
| • On Concrete Surface | 7  |
| • On Metal Surface    | 10 |

Mixed Density, g/cc	0.94 ±0.0 2
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RH at Application Time	< 75%
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### **HEALTH & SAFETY**

- Avoid swallowing and contact with skin / eyes. If swallowed, seek medical attention immediately. Do not induce vomiting.
- In the unlikely event of contact with skin, rinse with plenty of clean water and then cleanse with soap and water. Do not use solvent to clean the contacted area.
- Ensure adequate ventilation and avoid inhalation of vapours.
- Wear suitable protective clothing, gloves and eye protection during application.
- In the unlikely event of fire, use carbon-di-oxide or dry powder to extinguish fire.

### **PACKING**

Available in 500 ml container consisting of component A 250 ml and component B 250 ml.

**STORAGE AND SHELF LIFE**

Keep in a cool and dry place under shed away from heat. The shelf life of product is 12 Months in original unopened sealed condition.

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# **POLYSEAL S - 11C**

## **Two Component Polysulphide Gun Grade Sealant**

### **DESCRIPTION**

Polyseal S - 11C is based on liquid polysulphide polymers, which adhere to most of basic civil engineering materials like cementitious substrates, aluminium, glass, wood, mild steel etc. The product is used for sealing expansion joints, door-window surrounding joints & floor concrete to wall masonry separation joints etc. After mixing the base component & curing agent in given proportion rubber like material is formed. It conforms to BS 5212: 1990 Part I -Type F and Type FB (Flame and Fuel Resistance). Also complies IS 12118 Part 1 – 1987.

### **ADVANTAGES**

- Excellent UV resistance after full cure is over
- Can withstand in fully submerged condition
- Good chemical & water resistance
- Adhesion compatible to most of substrate
- Suitable for potable water after full cure
- Very high thermal flexibility
- Very high service life
- Flame and Fuel Resistance

### **APPLICATION**

- Vertical & Overhead expansion joints in Industrial, commercial or residential buildings
- Joints in concrete roads bridges, subways, flyovers & airport runway
- Joints between plastered masonry walls & aluminum door/window section sides
- Concrete cracks repairs in slab
- Joints in water retaining structures like water tank, swimming pool, aqueducts, dams, canals & reservoirs
- Atomic nuclear power station reactor domes
- Joints between pipe lines
- Roof light joints.

### **APPLICATION METHODOLOGY**

- Surface should be fully dry, clean and free from dust, laitance, oil and grease etc.
- Clean with sand paper & wire brush, then dust and foreign particles to be removed. Subsequently use masking tape at floor level beside both sides to get sharp edged neat and clean joint.
- Avoid adhesion of spill-over material beside the joint.
- Use polyurethane Foam (PUF) strips (equivalent) in expansion, construction & control joints as back up material to avoid 3-face adhesion and to avoid contact between joint forming board & sealant.
- Use of primer on vertical side faces of the joint is optional to ensure strong bonding between substrate and sealant. Primer must be recommended for old concrete.
- Sealant application should start after 30 minutes but not later than 2 hours after priming the surface.
- The Base and Accelerator compounds are packed in pre-weighed quantity as per the mixing ratio.
- Mix the material of individual container.
- Transfer entire quantity of Accelerator to the base compound and mix it thoroughly to a uniform and homogenous Grey colour.
- Mixing can be done manually with spatula/palette knife or special flat stirrer attached to a low speed electric mixer less than 500 rpm.

### **CLEANING**

Finish the joint in concave shape by using wooden batten soaked in soap water or white sprit from time to time. Remove masking tape within 30 minutes before setting of sealant. Clean tools and tackles using solvent like Xylene etc.

### **PROPERTIES**

Pot Life, 25°C	Minimum 2 hrs
Colour	Grey
Solid Contents, %	97 - 100
Service Temp,°C	- 40 - 85
Application Temp,°C	5 - 50
Theoretical Coverage, rm, grm	55 For 2.5 mm x 12.5 mm



Shore A Hardness	22 ± 3
Setting Time, hr, 35°C	6
Specific Gravity	1.60 – 1.70
Movement Accommodation Factor, %	
- Butt Joints	± 25
- Lap Joints	± 50
Full cure	Upto 8 days in tropical conditions
Service Temperature	- 40°C to 85°C

#### **HEALTH & SAFETY**

- Polyseal S-11C and primer may cause sensitization by inhalation and skin contact.
- Wear suitable clothing, gloves and eye/face protection. Barrier creams provide additional skin protection.
- Any skin contact occurs; remove immediately with a resin removing cream, followed by soap and water. Do not use solvent.
- In case of contacts with eyes, rinse with plenty of clean water and seek medical advice. Use only in ventilated areas.
- Fire: Primer is flammable. Do not expose flames or other sources of ignition. No smoking. Containers should be tightly sealed when not in use. In the event of fire, extinguish with carbondioxide or foam.

#### **PACKING**

Available in 4 kg Container packed 16 kg carton.

#### **STORAGE AND SHELF LIFE**

Store in a cool dry place under shed away from heat. The shelf life of product is 12 Months in original unopened sealed condition.

#### **CONDITIONS OF SALE**

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#### **NOTE**

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## **POLYSEAL S - 12C**

### **Two Component Polyurethane Sealant**

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#### **DESCRIPTION**

Polyseal S - 12C is a coal tar free modified two part polyurethane sealant which cures to form a durable, flexible, watertight bond with most building materials and is capable of accommodating, dynamic joint movement. It is available in two forms : Gun Grade (GG) and Pouring Grade (PG).

#### **ADVANTAGES**

- Cold Applied – no heating required
- Coal tar free
- High movement accommodation
- Excellent workability, easy to use
- High performance
- Fuel, oil and hydraulic fluid resistance.

#### **APPLICATION**

- Air-field runways
- Roads
- Bridge decks
- Docks and harbors
- Parking and Cargo areas
- Warehouses

#### **APPLICATION METHODOLOGY**

- Ensure that all joints are completely dry and free from all traces of dirt, dust, grease, any previous sealants and foreign matter.
- Clean thoroughly the surface by wire brushing, either hand or machine operated, grit blasting or grinding.
- Ensure dried and cleaned bonding surface in all joints to be sealed. Preferably, all joints should be parallel and straight for better sealing.
- Repair spilled joint should be repaired with appropriate material, such as epoxy mortar.
- Place into the base of the joint breaker or back up material to form correct cross section for joint sealant and to prevent the sealant bonding to the base of the joint.
- Prime the sealing slot surface with suitable Primer using clean dried brush.
- Apply Polyseal S - 12C within 0.5 – 2 hr of application of primer, depending on climatic condition, when the primer is just touch dry and not when the primer is dried completely.
- If the primer is dried completely or left overnight without applying sealant then remove dried primer by grit blasting and reapply.
- Add Component A (Resin) in Component B (Hardener) and mix thoroughly for 5 mins, until homogenous mix is achieved, using a slow speed drill (400 – 500 rpm) fitted with a suitable mixing paddle.
- Apply Polyseal S - 12C by pouring or by gun.

#### **JOINT SIZE**

- Polyseal S - 12C can accommodate large continual cyclic movements. However joint spacing shall be taken into consideration for optimum performance.
- Width of joints depends very much on the spacing between joints and designed to ensure total movement does not exceed MAF 25%. In areas subjected to traffic, a maximum joint width of 30 mm is recommended, with a recess of 5 mm below flush.
- Sealant depth should not exceed joint width. A width : depth ratio of 1 : 1 to 1.5 : 1 subject to a minimum 10 mm depth of sealants is recommended.

#### **CURE TIME**

- Pot life is approximately 2 – 3 hr at 23°C . However, the application time and rate of cure will depend upon the temperature of sealant and the ambient temperature at the time of application.
- At higher temperature, the rate of cure will be faster. Final cure, when full working properties are developed, occurs within two days at 25°C although the sealant will normally bear traffic with 24 hours of application.
- Low temperatures retard cure. Do not apply when the temperature is below 5°C.

## CHARACTERISTICS

Appearances	Viscous grey liquid
Colour	Grey resin, with colourless hardener
Solid content, %, by mass	100
Hardener Shore 'A' @ 25°C	15 ± 2
Pot life @ 23°C, hr	2 - 3
Tack free setting time, @ 35°C, hr	16 - 24
Butt Joints, %	25
Application Temperature, °C	> 5 < 40

## COVERAGE GUIDE

Joint Size	L / rmt
10 x 10	0.100
13 x 13	0.169
15 x 15	0.225
20 x 15	0.300
20 x 20	0.400
25 x 20	0.500
25 x 25	0.625
30 x 25	0.750

## HEALTH & SAFETY

- The product should not come in contact with the skin and eyes, or be swallowed.
- Ensure adequate ventilation and avoid inhalation of vapours.
- Wear suitable protective clothing, gloves and eye protection.
- In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately - do not induce vomiting.

## PACKING

Available in 3 units 3 L consisting of Comp A 2.4 L and Comp B 0.6 L.

## STORAGE AND SHELF LIFE

Store in properly ventilated room at a maximum temperature of 25 °C. Storage above this temperature may reduce the shelf life. The shelf life of product is 12 Months in original unopened sealed condition.

## CONDITIONS OF SALE

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## SU 10

### Single Component, Elastomer Polyurethane Sealant For Expansion Joints

#### FEATURES

Non staining

- Granite, marble, sandstone
- Metal frame, perimeter sealing
- Various joint sealing of PC and RC
- Aluminum

Expansion joints in heavy and light prefabrication and traditional masonry

Sealing joints for facade panels, curtain walls, boarding, exterior wood finishing

Joints between frame and preframe, between door frame and masonry

Adheres on a majority of building supports: concrete, glass, anodized aluminium, wood.

#### DESCRIPTION

SU 10 is a single component, elastomer polyurethane sealant for expansion joints.

#### SUBSTRATE PREPARATION

The surface must be clean, dry and free of dust, grease or residues. On concrete, wait first for it to cure out and stabilize (minimum 4 weeks). A preliminary test is necessary on siliconized tiles. It is up to the users to check the compatibility with the surface in terms of adherence, chemical compatibility and staining (make a pre-test if required). Size correctly the joint according to the predictable movements and to the capacity of movement. The width of the joint must be included between 6 and 40 mm. For the width of joint lower or equal to 10 mm, the depth of the joint must be equal to its width. For the widths of joints superior to 10 mm the depth of the joint must be equal in the middle of its width.

#### APPLICATION

Press a flexible backfilling rod that will not adhere to the sealant. The bottom of joint should not show notches likely to cause bubbling. Protect the edges of the joint by adhesive tape for a better finishing.

Apply the sealant in a continuous strip with enough pressure to fill properly the joint.

Apply the sealant in one layer with joints of small width, in three layers with joints of large width, the two first onto the edges of the joint and the third onto the bottom. Smooth with water free of additives. Press the sealant correctly against the edges and the bottom of the joint while avoiding the air bubbles inclusion. Remove the masking tape. Protect the joint from all downpours and water streaming.

Clean the material (equipment) with white spirit before drying. The cured sealant comes out by scratching.

Can be later painted after full curing. Use rather paintings in dispersal (acrylic, vinyl) and realize a preliminary test. The movement of the joint can pull (entail) the fissuring of the painting.

#### PHYSICAL PROPERTIES

Skin formation time	75 minutes
23°C, 50% RH	
Rate of cure in mm	in 24 hours
23°C, 50% RH	≥ 2.5
Resistance to flow	
- at 23°C	ISO 7390 ≤ 3 mm
- at 50°C	ISO 7390 ≤ 3 mm
Shrinkage	ISO 10563 ≤ 10%
Temperature of application	+ 5°C ≤ T ≤ + 40°C
Temperature of service	- 20°C ≤ T ≤ + 80°C
Specific gravity	1.3 g/cm <sup>3</sup>

## **CURED JOINT CHARACTERISTICS**

Shore A Hardness	20 - 25
DIN 53 505	
Modulus at 100%	0.20 - 0.25 Mpa
ISO 8339	
Elongation at Break	250%
ISO 8339	
Elastic recovery	> 70%
ISO 7389	
Water vapor Diffusion	32g / m <sup>2</sup> / 24 hours
NFT 30018	
Movement Capability	25%

## **STORAGE AND SHELF LIFE**

SU 10 has a shelf life of 12 months if kept in a dry, store at temperatures not exceeding 30°C. in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

## **CHEMICAL RESISTANCE**

Chemical resistance (as an indication): to water, cleaning agents, accidental spills of oils and hydrocarbons, accidental spills of acids and diluted bases. Because of the sensitivity of polyurethanes to UV, clear colours may change over time. This modification is only aesthetic and it does not affect the mechanical properties of the cured product.

## **COLOURS**

SU 10 is available in five standard colours: White, Grey, Middle Grey, Teak and Black.

## **PRECAUTIONS**

- Contains isocyanates.
- Avoid contact with skin.
- In the event of contact with eyes, clean immediately with water and obtain medical attention.
- Use only in well ventilated areas.
- Keep out of reach of children.

## **DISPOSAL/SPILLAGE**

Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

## **COONDITIONS OF SALE**

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