

Expansive hydrophilic waterproofing strip for sealing joints in tunnel segments, underground precast elements, horizontal and vertical construction joints and concrete to steel joints.



Field of application

- Sealing joints between tunnel segments.
- **Cast Joint SRB** can be used for sealing joints between concrete precast elements, horizontal and vertical construction joints, sealing pipe penetrations, sealing concrete to steel joints, etc.
- For sealing construction joints in fresh concrete where concrete cover is at least 10 cm to all sides.

Advantage

- **Cast Joint SRB** can be used in contact with fresh and sea or brackish water.
- **Cast Joint SRB** swells minimum 90% in contact with fresh water and minimum 70% in contact with sea/brackish water.
- **Cast Joint SRB** has a proven track record in concrete structures subject to medium to high water pressure.
- The composition of the compound creates a delayed initial swelling and makes **Cast Joint SRB** safe to install in insitu concrete applications.
- Reversible swelling in case of wet-dry cycles with fast renewed swelling after the first cycle.
- Swelling capacity up to 3 times the original volume in contact with water.
- Will not sag when correctly placed.
- Easy to install by nailing or gluing.
- Due to its flexibility and high swelling capacity, **Cast Joint SRB** can absorb small movements in the construction.
- Has a good all-round chemical resistance^(*) and can resist to petroleum, mineral and vegetable oils and greases.
- **Cast Joint SRB** has a good impact resistance.

Description

Cast Joint SRB is a hydrophilic waterproofing strip made from a combination of an elastomer and a hydrophilic resin. When confined, it will swell in contact with water and build up a waterproofing pressure inside the joint to seal the joint against water leaks. **Cast Joint SRB** has a swelling capacity of up to (90% of the original volume) in contact with water. The composition of the compound creates a delayed initial swelling and makes **Cast Joint SRB** safe to install in insitu concrete applications.

Application

1. Type selection

- For sealing joints between precast elements, horizontal and vertical construction joints, pipe penetrations and concrete to steel joints.
- For sealing joints between precast tunnel segments.
- **Cast Joint SRB** can only function properly in a confined space. The expansion of **Cast Joint SRB** will create a certain pressure, installation in the middle of the joint is preferred.
- Installation during heavy rain or in prolonged contact with water can result in a premature swelling of the strip, which should be avoided.
- Application surfaces should be level, dry, clean and free of oils, dust and laitance, etc.

2. Nail application (insitu concrete construction joints)

- Nail application is only recommended in insitu concrete applications. For precast element and segment applications, it is recommended to glue **Cast Joint SRB** strips due to concrete hardness.
- **Cast Joint SRB** should only be applied to level and smooth surfaces. If possible, make a rebate of the same width as the selected **Cast Joint SRB** profile during concrete pour using a wooden or metal strip. If this rebate cannot be made into the poured concrete surface and the surface is rough, it is recommended to level the surface with before installation of the **Cast Joint SRB** strip.
- When nailing the strip into place, use nails with washers of a diameter smaller than the width of the **Cast Joint SRB** strip. Use 1 nail every 20 cm.
- Slight tension should be applied to the waterproofing strip during nailing to assure complete contact with the joint surface. Do not stretch the strip during application of this tension.
- The applicator must ensure complete contact of the strip with the joint surface during nailing, pull the strip to ensure the correct tension without overstretching when nailing.

3. Application using Fixer (dry or moist concrete substrates)

- Apply a 5 x 10 mm bead of adhesion in the middle of the joint.
- Press the **Cast Joint SRB** strip into the fresh Fixer.
- **Cast Joint SRB** strips can be installed around pipes, either by adhesion or by connecting the ends with a steel wire.

4. Application using Adhesive (precast elements and tunnel segments)

- **Cast Joint SRB** strips are always applied on the outside face of the compression seal as closely inwards as possible
- Adhesive: brush applied contact glue for dry substrates.
- In case the surface is contaminated, clean and degrease by dry compressed air or by cleaning with a cloth and solvent. Do not use water or water based detergents.
- It is recommended to unroll and pre-cut the **Cast Joint SRB** strip to the required length.
- Apply Adhesive to the instructions and consumptions in the respective Technical Data Sheet.

- Let Adhesive according to the curing times specified in the respective Technical Data Sheet.
- Apply the **Cast Joint SRB** strip to the substrate and apply a constant pressure. The force of the pressure is more important than the duration.
- Finish the installation by lightly tapping the strip with a rubber hammer without displacing the **Cast Joint SRB** strip.

Important

- Roll ends are simply butted together to assure a waterproof seal. Do not install in overlap.
- The strip needs to be in contact with the joint over its full length.
- Swelling capacity and speed depends on the alkalinity and other contaminants in the water and is up to 90% in clean water. For applications in contact with contaminated water, please contact your LaMaCo representative.

5. Cleaning

- Fresh Adhesive can be cleaned with solvent MEK. Cured product needs to be removed by mechanical means.

Technical data/properties

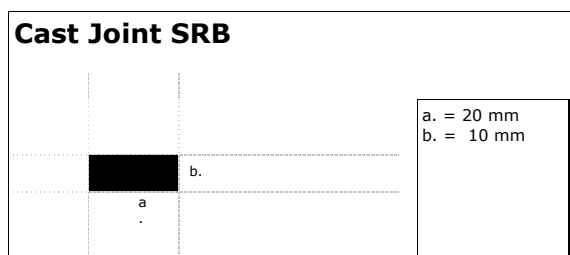
Physical properties		Cast Joint SRB
Hardness [shore A]		42±7
Tensile strength		3.5Mpa [min]
Elongation		450% [min]
Expansion rate		150%
Repeated water immersion test	Tensile strength	3Mpa [min]
	Elongation	350% [min]
	Expansion rate	150%
Low temperature bending [-20°C*2h]		No crack

Appearance

Rectangular hydrophilic strip made with smooth sides. Colour : red.

Dimensions

Cast Joint SRB: 10 x 20, 15 x 30 & 20 x 30mm (5 meter/roll)



Consumption

The necessary quantities depend on the length of the various (construction) joints, which need to be sealed. Roll ends are simply butted together to assure continuous seal. Typical design consumption for adhesive on a smooth concrete surface can be calculated by multiplying the strip or rebate width in mm by a factor to calculate consumption.

Storage

Unlimited in a dry place in its original packaging.
Adhesive need to be stored in a dry and conditioned area.
Storage temperature needs to be between 5°C and 25°C.
Shelf life: 1 year in the original closed packaging.

Handling Precautions

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding product safety data sheets and the brochure "Hygienic Precautions for Handling Plastic Products"

The General Term & Conditions

All recommendations for use of our product, whether given by us in writing, verbally, or to be implied from the results of tests carried out by us are based on the current state of our knowledge. Notwithstanding any such recommendations the Buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for this intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility therefore. The Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.

The above mentioned details Specified key data are individually checked throughout, guarantee, and included in the certificates of Analysis (CoAs). & Typical key data are spot checked, the value are typical for the product and are indicated for information only. The values are not guaranteed or included in the CoAs.



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