

## Parabond Construction

Construction adhesive and sealant.

### Product

Parabond Construction is a one-component, neutral curing, ready to use, Hybrid-Polymer based sealant adhesive with permanent elasticity. Parabond Construction complies with the ISO 11600-F class 25HM, and was awarded an ATG label & SNJF label.

### Applications

It is very useful as universal adhesive in the sealing of horizontal (and vertical) movable and connecting joints, for both interior and exterior application. Parabond Construction bonds without primer on almost all materials occurring in the building industry, such as aluminium, galvanised and stainless steel, zinc, copper, natural stone, concrete, brick, cement based cover sheeting, treated wood, gypsum, glass, various synthetic materials etc. Can also be used for bonding and sealing materials in the automotive industry.

### Examples of Applications

*As sealant:*

- Horizontal and vertical joints
- Sealing of cracks and joints
- Sealing in caravan, train and bus construction
- Sealing in air-conditioning installations and air-conditions
- Jointing and gluing work in verandas, bathrooms, kitchens etc.
- All jointing where flexibility is important
- Sound proofing between concrete and drain pipes
- Sealing in containers
- Sealing between frame and wall

*As adhesive:*

- Attaching and sealing of skirting boards, steps, doorsteps etc.
- Attaching protective profiles
- Fixing of covers
- Fixing of prefab elements

Parabond Construction should not be used with:

- Joints that are exposed to constant submersion under water
- Joints with a width or depth < 5mm
- Swimming pools containing chlorine, with constant submersion under water
- Not suitable for indoor swimming pools
- Bitumen: use our Paraphalt for this purpose
- Polycarbonate and poly-acrylate: use our Parasilico PL for this purpose.

Parabond Construction is not suitable for gluing PE, PP, PA, Teflon® and bitumen. Proper ventilation during processing and during the hardening is important.

### Characteristics

- Jointing and gluing
- Excellent resistance to aging and weather conditions
- Bonds to almost all building materials
- Bonds even on moist supports
- For wide joints up to 50mm
- Solvent and isocyanate free
- Permanently elastic at temperatures from -40°C to +90°C
- Does not cause any corrosion in metal joints
- For interior and exterior use
- UV and weather resistant
- Suitable for rooms with high humidity
- Suitable for use with natural stone
- Neutral, odourless adhesive

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- Compatible with materials used for sealing the edges in double glass
- Paintable with most water and solvent based paints. Is paintable wet on wet. After 48 hours, the surface must be cleaned first before it can be painted. Pre-testing is necessary. Alkyd paints require an extended drying time.

## Surface Preparation and Sealant Application

*Base Component* - must be fixed and rigid enough. The base can be slightly damp.

*Pre-treatment* - the materials to be joined must be cleaned and free from dust and grease. If necessary, degrease using Parasilico Cleaner, MEK, alcohol or ethanol. For strongly absorbent components, it is recommended to use DL 2001 Primer. It is advisable to do bonding tests. It is the user's responsibility to check whether the product is suitable for his application. Our technical department could be consulted, if necessary.

### Application

Applying as sealant: provide shallow joints (on the floor) with a self adhesive tape or foam tape to prevent triple-sided bonding. The adhesive depth of the movable joint should amount to approx. 2/3 of the joint width. Joints that are too deep should be filled with suitable filler foam (PE or PU-filler foam). With floor joints, they are subjected to high mechanical load, the sealant should be applied deep. It is better to apply the sealant at an angle sloping from the floor surface to the adhesive surface (rim sides). The sealant should only bond at the sides of the joint.

**Joint Size:** the necessary width of a dilation joint depends on the temperature fluctuation,

properties of the material and the dimensions of the construction elements. Apply at least a joint width of 6mm.

### Joint Dimensions

Joint Width	Joint Depth	Allowed Deviation
6mm	6mm	± 1mm
8mm	6mm	± 1mm
10mm	6-8mm	± 2mm
15mm	10mm	± 2mm
20mm	10-12mm	± 2mm
25mm	15mm	± 3mm

Applying as adhesive: apply Parabond Construction with the supplied nozzle in strips or dots to the base or on the element to be bonded. The strips must be applied in vertical rows. The parts can at this stage still be adjusted, just push it down well. For information regarding the distances between the adhesive strips, refer to the heading "Adhesive Requirements".

It is advised to have a gap of 3.2mm between the parts to be bonded, to allow the adhesive to smooth out any distortions (especially important in exterior use or under humid conditions). To achieve this space, spacer blocks or pieces of foam tape with a thickness of 3.2mm may be used. If the adhesive layer does not have to take up any, or only has to take up a slight mutual distortion between the construction parts, a thinner adhesive layer (at least 1.5mm) will suffice (for example in interior applications).

**Exposure Time** - bring together parts to be jointed as quickly as possible, at least within 15 minutes (this depends on the temperature and relative humidity level). The parts can at this stage still be adjusted, but finally one should be pushed down well over the other or tapped with a rubber hammer.

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Drying time & strength: Parabond Construction combines the benefits of a tape with that of a reactive adhesive system.

- During assembly, Parabond Construction has a high bonding capacity and a high internal strength.
- After drying under the influence of humidity, Parabond Construction cures into a permanently elastic and extremely strong adhesive bond.

*Instantaneous Strength* - the internal strength of Parabond Construction immediately after application is such that bonding is possible without clamping or temporary support. Internal strength (immediately) > 0.0013 N/mm<sup>2</sup>. Strength per m<sup>2</sup> adhesive surface > 1300 N (>130 kg). After one hour, the strength has increased threefold: internal strength (after 60 minutes) >0.0039 N/mm<sup>2</sup> and strength per m<sup>2</sup> adhesive surface > 3900 N (> 390 kg).

*After Drying* - Parabond Construction dries into a durable elastic and extremely strong adhesive connection under the influence of humidity. The maximum tensile stress is > 2 N/mm<sup>2</sup> (ISO 370 and 1.1 N/mm<sup>2</sup> (ISO 8339-40). The shearing force amounts to 1-3 N/mm<sup>2</sup> depending on the adhesive construction. Refer to the Technical Characteristics for additional information regarding the strength parameters. Elongation at break: 230% (ISO 8339).

### Adhesive Requirements (For the benefit of the initial adhesion).

Parabond Construction is applied in the form of adhesive strips. By placing the element to be joined, the adhesive distributes between the element and the base. The eventual surface of the adhesive layer determines the strength of the

connection, both initially as well as after drying.

The relationship between the dimensions of the glue strip and the final adhesive surface is determined by the surface of the parts to be joined and obviously of the final thickness of the adhesive. Triangular glue strip of 9mm wide and 9mm high (approx. 40mm<sup>2</sup> in area) provides an adhesive width of 13mm at a thickness of 3mm on smooth materials. On uneven backgrounds, the adhesive width at a minimum thickness of 3mm will correspond with approx. 10mm. At a glue thickness of 1.5mm, the widths are respectively 26 and 20mm approx. Apply the strips in parallel to each other, to allow the humidity to reach the adhesive between the strips.

Assuming a standard triangular strip of 9mm wide and 9mm high and - after pressing together to adhesive thickness of 1.5 and 3mm, the relationship as stated below can be established between strip distance and weight of the parts to be joined. Level based surfaces were assumed. it is advised to carry out tests beforehand. With the gluing of bigger wall or ceiling elements, possible additional gravitational forces should be considered (eg. because of bends in the panels).

### Strength Immediately & After One Hour of Application

Thickness of the adhesive 1.5mm (on smooth support - width after applying pressure is 26mm).

10 cm	Adhesive surface 26% of the base	320 N	32.0 kg	960N	96 kg
20 cm	Adhesive surface 13% of the base	160 N	16.0 kg	480 N	48 kg
30 cm	Adhesive surface 9% of the base	110 N	11.0 kg	330 N	33 kg

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40 cm	Adhesive surface 6.5% of the base	85 N	8.5 kg	255 N	25.5 kg
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Thickness of the adhesive 3mm (on smooth base - width after applying pressure is 13mm).

5 mm	Adhesive surface 26% of the base	320 N	32.0 kg	960 N	96 kg
10 cm	Adhesive surface 13% of the base	160 N	16.0 kg	480 N	48 kg
20 cm	Adhesive surface 6.5% of the base	85.5 N	8.5 kg	255 N	25.5 kg
30 cm	Adhesive surface 4.5% of the base	58 N	5.8 kg	174 N	17.4 kg
40 cm	Adhesive surface 3% of the base	39 N	3.9 kg	117 n	11.7 kg

When determining the number of strips, make sure that the internal cohesive forces of the parts to be joined are not exceeded (eg. ceiling tiles based on mineral wool. With such materials, it is advisable to apply the adhesive to the biggest possible surface). Distribute the adhesive strips regularly over the surface to be glued.

### Removal of Surplus Adhesive

Any adhesive that may protrude along the edges can be removed using a stopping knife. Adhesive residue that has not yet dried, can be removed using Parisilico Cleaner, dried glue must be removed mechanically. If desired, smooth finishing can be done using DL100 or rubber stripper.

### Technical Data

Basic Ingredient	Hybrid Polymer
Curing System	By means of humidity
Curing Speed	2.5 to 3mm / 24 hours at 23°C and 50% R.H.
Number of Components	1
Skin Formation Time	35 minutes at 23°C and 50% R.H.
Density	1.48 g/ml approx. (ISO 1183)
Shore A Hardness	35 (+/- 5) (ISO 868)
Joint Movement Capacity	+/- 25%
Modulus at 100% Elongation	0.800 N/mm <sup>2</sup> (ISO 8339-40)
Modulus at Break	1.100 N/mm <sup>2</sup> (ISO 8339-40)
Elongation at Break	230% (ISO 8339-40)
Shearing Force	1.444 N/mm <sup>2</sup> (DIN 53283)
Solvent Content	0%
Isocyanate Content	0%
Dry Matter Content	100% (approx.)
Processing Temperature	+5°C to +40°C (do not process below +5°)
Temperature Stability	-40°C to +90°C
Moisture Resistance	Very Good
Frost Stability	Not sensitive to frost

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## Packaging & Colour

25 cartridges of 290ml per box: white, black, grey (RAL 7004, dark brown (RAL 7023), light brown (RAL 8007), pearl white (RAL 1013), basalte, dark beige, natural stone, grey beige (RAL 1019), RAL 7005, cement grey (RAL 7023), creme white (RAL 9001) and terracotta.

20 sausages of 600ml per box: white, black, grey (RAL 7004), dark brown (RAL 8016), basalte, dark beige, natural stone, RAL 7005, cement grey (RAL 7023), creme white (RAL 9001), middle grey, anthracite grey (RAL 7016), terracotta, quartz grey, grey beige (RAL 1019), bronze, panel grey and cement grey.

## Certificates

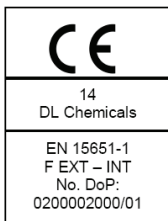


Label SNJF Facade nr 3749 - Mastic type élastimère classe 25E.



ATG certificate nr 12/2643.

Leeds certificate for low VOC.



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## Storage and Stability

Keep in a dry and cool place in sealed packing. Shelf life is 12 months in the sealed packing between +5°C and +25°C. Shelf life of opened packaging is limited.

## Safety

Please refer to safety data sheet, which is available upon request.