
# 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, galvanized and stainless steel, zinc, copper, natural stone, concrete, brick, cement based cover sheeting, treated wood, gypsum, glass, glazing, various synthetic materials etc.

Examples of applications are:
***As sealant:***
- Horizontal and vertical joints
- Sealing of cracks and joints
- Sealing in caravan, train and bus construction
- Packings in air-conditioning installations and air-conditioning
- Gluing work in verandaôs, bathrooms, kitchens, etc.
- All jointing where flexibility is important
- Sound proofing between concrete and drain pipes
- Packings 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 < 5 mm
- 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



082013

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

**Characteristics:**

- Bonds to almost all building materials
- Bonds even on moist supports
- 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
- 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 clean and free from dust and grease. If necessary, degrease using Parasilico Cleaner, MEK, alcohol, or ethanol. For strongly absorbent components, it is recommend to use DL 2001 Primer. It is advisable to do bonding tests. It is the userôs responsibility to check whether the product is suitable for his application. Our technical department could be consulted, if necessary.

Application:
1) 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 deep floor joints, it is advisable to use a strong PU-filler foam as back-up material. With floor joints, that 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 6 mm.

Joint dimensions:

| Joint width | Joint depth: | Allowed deviation |
|---|---|---|
| 6 mm. | 6 mm | ± 1 mm |
| 8 mm | 6 mm | ± 1 mm |
| 10 mm | 6-8 mm | ± 2 mm |
| 15 mm | 10 mm | ± 2 mm |
| 20 mm | 10-12 mm | ± 2 mm |
| 25 mm | 15 mm | ± 3 mm |

2) 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 3.2 mm. 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 3.2 mm 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 1.5 mm) will suffice (for example in interior applications).

Exposure time: Bring together the 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.

Drying time and 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/mm²
Strength per m² adhesive surface > 1300 N (> 130 kg)
After one hour, the strength has increased threefold:
Internal strength (after 60 minutes) > 0.0039 N/mm²
Strength per m² 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/mm² (ISO 37) and 1.1 N/ mm² (ISO 8339-40). The shearing force amounts to 1-3 N/mm² depending on the adhesive construction. Refer to the Technical characteristics for additional information regarding the strength parameters. Elongation at break: 230% (ISO 8339-40).

Adhesive Requirements:
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 structure of the parts to be joined and obviously of the final thickness of the adhesive. Triangular glue strip of 9 mm wide and 9 mm high (app. 40 mm² in area) provides an adhesive width of 13 mm at a thickness of 3 mm on smooth materials. On uneven backgrounds, the adhesive width at a minimum thickness of 3 mm will correspond with approx. 10 mm. At a glue thickness of 1.5 mm, the widths are respectively 26 and 20 mm approx. Apply the strips parallel to each other, to allow the humidity to reach the adhesive between the strips.
Assuming a standard triangular strip of 9 mm wide and 9 mm high and ï after pressing together to adhesive thickness of 1.5 and 3 mm, the relationship as stated below can be established between strip distance and weight of the parts to be joined. Level base 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 and after one hour of application:
Thickness of the adhesive 1.5 mm (on smooth support - width after applying pressure is 26 mm)

| Strip-distance | | immediately (per m²) | | after 60 min. (per m²) | |
|---|---|---|---|---|---|
| 10 cm | (adhesive surface 26% of the background) | 320 N | 32,0 kg | 960 N | 96 kg |
| 20 cm | (adhesive surface 13% of the background) | 160 N | 16,0 kg | 480 N | 48 kg |
| 30 cm | (adhesive surface 9% of the background) | 110 N | 11,0 kg | 330 N | 33 kg |
| 40 cm | (adhesive surface 6.5% of the background) | 85 N | 8,5 kg | 255 N | 25,5 kg |

Thickness of the adhesive 3 mm (on smooth base - width after applying pressure is 13 mm)

| Strip-distance | | immediately (per m²) | | after 60 min. (per m²) | |
|---|---|---|---|---|---|
| 5 cm | (adhesive surface 26% of the background) | 320 N | 32.0 kg | 960 N | 96 kg |
| 10 cm | (adhesive surface 13% of the background) | 160 N | 16,0 kg. | 480 N | 48 kg. |
| 20 cm | (adhesive surface 6.5% of the background) | 85.5 N | 8.5 kg. | 255 N | 25.5 kg. |
| 30 cm | (adhesive surface 4.5% of the background) | 58 N | 5.8 kg | 174 N | 17.4 kg |
| 40 cm | (adhesive surface 3% of the background) | 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 Parasilico 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 3 mm/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. (IS0 1183) |
| Shore A hardness: | 35 (+/- 5) (ISO-868) |
| Joint movement capacity: | 25% |
| Modulus at 100% elongation: | 0.800 N/mm² (ISO-8339-40) |
| Modulus at break: | 1.100 N/mm² (ISO-8339-40) |
| Elongation at break: | 230% (ISO-8339-40) |
| Shearing force: | 1.444 N/ mm² (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°C.) |
| Temperature stability: | -40°C to +90°C |
| Moisture resistance: | very good |
| Frost stability: | not sensitive to frost |

**Packaging & Colour:**
25 cartridges of 290 ml per box: white ï black ï grey (ral 7004) ï dark brown (ral 8016) ï light brown (ral 8007) ï Ral 1013 ï basalte ï dark beige ï natural stone ï ral 1019 ï ral 7005 ï ral 7023 ï ral 9001 ï terracotta.

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

**Certificates:**

Label SNJF Façade nr 3749 ï Mastic type élastomère classe 25E

ATG certificaat nr 12/2643

Leeds certificate for low VOC

**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 packing is limited.

**Safety:**
Please refer to safety data sheet, which is available on request.

**For further information please contact:**
**DL Chemicals NV**
Roterijstraat 201-203
8793 Waregem
Tel +32 (0)56 62 70 51- Fax +32 (0)56 60 95 68
E-mail: info@dl-chem.com - Internet: www.dl-chem.com