

Liquid one-component polyurethane surface adhesive (D4 foam adhesive) for the construction industry, solvent-free, very good strength, also available in cartridges

Application areas

Structural adhesive with versatile application possibilities like e.g.

- in wood processing (slot, tenon, prong and edge bonding)
- suitable for surface bondings (e.g. sandwich and balustrade elements)
- ideal for timber construction, carpenters, drywall construction, handicraft and industry

Product benefits

- liquid
- consistent viscosity thanks to processing from the cartridge (no thickening as in the bottle)
- 24 months shelf life (from the date of production)
- foaming
- through its broad adhesion spectrum, the product is very versatile and can be used on different materials such as wood, chipboards, HPL, acoustic panels, insulation materials (PUR, PS foam and mineral wool), various other plastics like PVC-hard or GRP (brushed) or treated aluminium
- solvent-free (VOC-free)
- almost odourless
- sandable when cured
- recoatable / lacquerable when fully cured
- good thermal adhesive strength
- for indoor and outdoor use
- no risk of corrosion
- achieves stress group D4 for wood / wood bonding in accordance with EN 204
- achieves a wood / wood gluing heat resistance according to DIN EN 14257 (WATT 91) of 8.5 N/mm²

Base

1C moisture-curing polyurethane; cross-linking is chemically neutral with air humidity, whereby the adhesive foams up.

Restrictions

When bonding different materials (especially outdoors), the thermal linear expansion of the different materials must be taken into account; if necessary, use an elastic assembly adhesive.

Not suitable for PE, PP, PTFE, PVC-soft, Teflon[®], bitumen, waxy substrates and larch wood in the outdoor area. Can only be applied to chemically pre-treated aluminium, brass and copper.

For outdoor applications, the adhesive joint must be protected from direct weathering. Not recommended for glass and mirrors.

Cleaning agents

Wisaclean R 216 for cleaning non-absorbent adhesive surfaces and fresh product residues.

The cured product can normally only be removed mechanically. To wash your hands, please use water and soap.

Processing

Acclimatise the product before processing.
This product is for specialist trained personnel.
The substrate must be clean and free of dust, rust and grease.
Clean non-absorbent surfaces with Wisaclean R 216.
Check treated and non-absorbent surfaces with an adhesion test.
Depending on the surface of the material, it will be necessary to determine whether the adhesion can be improved by sanding or priming the surface.

Open cartridges in an upright position (liquid content).
Apply adhesive to one side using a spatula or similar and join before the skin forming time has elapsed. Press or at least fix parts until sufficient functional strength is achieved.
Comply with pressing time: at least 90 min, moistened at least 70 min.
Recommended press power: 0.015 N/mm² bzw. 1500 kg/m².
Close the container tightly again immediately after use.

If non-absorbent materials (material moisture <8 %) are bonded together, the adhesive must also be «finely dusted» with water in order to achieve complete curing.
As a guideline ca. 10 g water/m² at 150 g adhesive/m².
Our GM-52 hand sprayers have proven themselves in practice for particularly fine atomisation of water.

When bonding vapour-tight materials together, ensure that no air is trapped. Ensure ventilation of the bonded joint if necessary.

Attention! The product foams up during the setting process!
If necessary, protect parts that are not to be glued with a PE film.

Remark

Skin formation, dwell time, time to functional strength and curing are largely dependent on temperature, air and material humidity, application quantity and substrate.
The processor must add appropriate safety margins to the specified guide values.

Bonding of metals

- In most cases, the adhesion will be improved by sanding smooth surfaces with abrasive paper (e.g. P 120).
- Bonding of aluminium, copper, brass: only to chemically pre-treated or painted surfaces; these materials cannot be permanently bonded in an age-resistant manner without appropriate pre-treatment of the bonding surfaces.
- Galvanised sheet metal must always be protected against permanent exposure to standing moisture (white rust formation). When bonding, it must be ensured that any moisture that occurs does not reach the bonding surface!

Bonding of wood

- When gluing wood, the wood moisture content must not exceed 15 % or fall below 8 %. If the wood is very dry, it is advisable to wipe the surfaces to be glued with a cloth slightly moistened with water just before applying the adhesive.
- In the case of woods rich in substances / oily woods, e.g. teak, wash the bonding surfaces with Wisaclean R 216.

- PUR adhesives must never be used for exterior larch gluing. The wood constituents «Arabicum Galactan» contained / forming here destroy / weaken the bond strength considerably.
- When gluing solid wood, the adhesive should preferably be applied to both glued surfaces. The pressing pressure should be $>1 \text{ N/mm}^2$. Experience has shown that the final strength increases with the level of pressing pressure.
- Precise fit is absolutely essential.
- Provide the exterior wood with a suitable surface protection and protect it structurally.

Density	ca. 1.14 g/ml
Tensile shear strength	ca. 13 N/mm ² (beechwood / beechwood)
Thermal adhesive strength	ca. 8.5 N/mm ² acc. to DIN EN 14257 (WATT 91)
Viscosity	ca. 5000 mPa*s (at +20 °C)
Consistency	low viscous, liquid; the viscosity during processing at 15 °C is about twice as high as at +25 °C
Skin formation	under normal conditions +20 °C, 50 % rel. humidity dry ca. 35 min moistened ca. 25 min
Pressing time	dry ca. 90 min (wood-wood bonding) moistened ca. 70 min under normal conditions +20 °C, 50 % rel. humidity recommended press power: 0.015 N/mm ² resp. 1500 kg/m ²
Film properties	tough-but-flexible
First functional strength	from ca. 90 min (wood-wood bonding at +20 °C, 50 % rel. humidity)
Curing time	75 % final strength after ca. 24 h 100 % final strength after ca. 7 d
Applied quantity	ca. 100 - 350 g/m ² depending on substrate, temperature and application quantity
Recoatability	Can be sanded and painted over after complete cross-linking with most paint systems. The adhered workpieces should only be overpainted after the adhesive has cured completely; if the lacquer is applied prematurely, the formation of bubbles on the lacquer is not excluded. Own tests are necessary.
Temperature resistance	from -35 °C up to +110 °C (after complete cross-linking)
Processing temperature	from +7 °C up to +30 °C

Substrates

Wood, wood-based materials, chipboards, HPL, gypsum fibreboards, acoustic panels, insulation materials (PUR, PS foam and mineral wool), various other plastics like PVC-hard or GRP (brushed), corian, concrete, compact masonry, ceramics, enamel, treated aluminium, steel, galvanized steel, polyester, epoxy, glass fibre reinforced plastics, Sagex[®], decorative, polyurethane and polystyrene foam panels, many thermoplastics and duroplastic plastics (except PE and PP) and many other materials. In case of other surfaces, own tests are required.

Frost resistance

up to -30 °C (during transport)

Further information



You can find more information about this product (link to the product on our homepage, safety data sheet, certificates, special enquiries etc.) under the adjacent ISOPIN QR code.

Item no. + Colour

PUR 511.310 brownish (cartridge)

PUR 511.10. brownish (PE can)

Sale only through qualified specialised retailers.

Delivery form / Content quantity

Packing unit of 12 cartridges of 310 ml / 350 g
PE cans of 10 kg

Shelf life

In closed original packaging, protected from direct sunlight and stored in a dry place between +15 °C and +25 °C, the official shelf life is 24 months from date of production (the printed expiry date is decisive). Over storage time, viscosity increases and reactivity decreases.

Accessories



Item no.	Brief description
KTF 2020	glue application nozzle for cartridges

Safety and disposal: Familiarise yourself with the valid Safety Data Sheets (SDS) for the products used. All applicable safety regulations and disposal instructions must be observed.

Observe: All information is based on careful examinations in the labs and our previous practical experience. They are non-committal notes. Due to the many materials that are marketed and the different processing methods, which we cannot influence, we can, of course, not assume any warranty, including under patent-law, for the result of your work. We recommend performing sufficient own tests to find out if the product meets the respective requirements. In addition, we refer to our terms and conditions of sale, delivery and payment, available at www.wisabax.ch/agb.html. © Wisabax AG - This technical data sheet replaces all older versions.

Have you noticed an unclear formulation or an error? Thank you for your feedback. In case of doubt, the German version of the technical data sheet applies.