Wisapur® 560-2 / TH 550

Two-component polyurethane adhesive for bonding horizontal surfaces in construction, road transport and container industry; flowable and impact resistant

Application areas

High quality 2C polyurethane reactive adhesive for permanent connections in the industrial and commercial sectors like e.g.

- for bonding core composite elements (sandwich and balustrade elements, cladding sheetings, cover layers etc.), where safe and controlled chemical cross-linking is required
- for the constructive, force-fit bonding of GRP sandwich structures in vehicle construction (e.g. cooling case construction)
- for application with a notched trowel, squeegee or roller, but also for moulding
- ideal for automotive undustry, transport industry, building industry, industry

Product benefits

- viscous liquid (pourable, easy to spread)
- semi-hard, impact resistant
- high mechanical strenght properties
- good thermal resistance
- good weather resistance
- good chemical resistance
- through its broad adhesion spectrum, the product is suitable for the majority of materials, in particular metals such as treated aluminium, plastics like PVC, glass fibre reinforced plastics like GRP (brushed), insulation materials like PUR, PS foam, mineral wool, melamine resin panels, steel, aluminium sheet, but also stone, ceramics, wood-based materials like HPL, MDF and plywood boards
- volume stabilised (neither expansion nor shrinkage)
- humidity resistant (after complete hardening)
- relatively insensitive to wood moisture
- meets the requirements of the International Maritime Organisation (IMO)
- controlled and safe cross-linking
- solvent-free (VOC-free)
- plasticiser free
- compatible with natural stone
- almost odourless
- sandable when cured
- recoatable, lacquerable
- no risk of corrosion

Base

2C polyurethane reaction adhesive

Restrictions

Not suitable for PE, PP, PTFE (Teflon®), bitumen and waxy substrates.
Not suitable for raw aluminium without pre-treatment.
Not recommended for PVC-soft, glass and mirrors. 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. We will be happy to be of assistance with your elastic bonding requirements.

For outdoor applications, the adhesive joint must be protected from direct weathering. In addition, we recommend that you carry out sufficient tests of your own to determine the suitability of this product for your particular requirements.

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

This product is for specialist trained personnel.
Acclimatise the product before processing.

The bonding surfaces must be sound, dry and free of dust and grease. Clean non-absorbent surfaces with Wisaclean R 216 and if necessary sand beforehand. Check treated and non-absorbent surfaces with an adhesion test. Stabilise or repair loose and sandy substrates beforehand.

Stir binder component before adding hardener. Mix the hardener homogeneously with the binding component in the specified ratio (ca. 400 rpm). Use up the product within the processing time.

By adding the accelerator Wisapur-BZ 505, the pot life and curing time can be reduced. Consequently, processing times are understandably shorter.

By adding approx. 1 % Wi-colour paste (red, blue, yellow, white, black), the colour of the adhesive can be individually adjusted as required. The adhesive changes colour when exposed to sunlight (UV radiation).

Apply adhesive to one side and join before the processing time has elapsed. Recommended tools: putty knife, squeegee, roll.

Press the parts until sufficient functional strength is achieved.
Recommended dwell time: ca. 12 h
Recommended press power: 0.015 N/mm^2 resp. 1500 kg/m^2.

If necessary, protect parts that are not to be glued with a PE film.

Remark

- The adhesive components must not come into contact with moisture before and during processing. This leads to foaming during the reaction and thus reduces the strength of the bond.
- Pressing time, time to functional strength and through-hardening are largely dependent on temperature and application quantity.
- 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 %.
- 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.
- Experience has shown that the final strength increases with the level of pressing pressure.
- Provide the exterior wood with a suitable surface protection and protect it structurally.

Colour

Binder (A-Component)	beige-white
Hardeners (B-Component = Wisapur TH 550)	brown
Mixture	**beige**

Film properties

semi-hard, impact resistant (when cured)

Shore D hardness

ca. 60 (cured film, acc. to ISO 868 / DIN 53505)

Tensile strength

ca. 11 N/mm² = 11 MPa (at +20 °C, acc. to DIN EN ISO 527)

Mixing ratio

A : B 5.0 : 1.0 (parts by weight)
A : B 3.7 : 1.0 (parts by volume)

Viscosity Brookfield RVT

Binder (A-Component)	ca. 35 000 mPa.s	viscous liquid, pourable
Hardeners (B-Component)	ca. 300 mPa.s	liquid
Mixture	ca. 10 000 mPa.s	low viscous

The viscosity during processing at 15 °C is about twice as high as at +25 °C.

Density

Binder (A-component)	ca. 1.66 g/ml
Hardeners (B-component)	ca. 1.23 g/ml
Mixture	ca. 1.57 g/ml

Breaking elongation

ca. 30 % (acc. to DIN EN ISO 527)

Pot life

ca. 55 min for a preparation quantity of 100 g at +20 °C

Processing time

ca. 30 - 40 min
The processor must add appropriate safety margins to the specified guide values.

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First functional strength
from ca. 8 h - 12 h (at +20 °C, depending on load and application)

Curing time
90 % final strength after ca. 24 h, at +20 °C
100 % final strength after ca. 7 d

Tensile shear strength
DIN / EN 14869 Alu/Alu 8 N/mm^2
DIN / EN 1465 Alu/Alu 12 N/mm^2

G_{10}-Modulus
30 N/mm^2 (acc. to DIN EN 14869-2)

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. Self-testing is necessary.

Temperature resistance
from -160 °C up to +90 °C (after complete cross-linking)
up to +120 °C (for a short time, max. 1 h)

Processing temperature
from at least +15 °C up to +25 °C

Substrates
Glass fibre reinforced plastics, treated aluminium, steel, galvanized steel, PVC-hard, polyester, epoxy, decorative, polyurethane and polystyrene foam panels, many thermoplastics and duroplastic plastics (except PE and PP), wood-based materials and many other materials.
For 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. / Content
Delivery form

Item no.	Weight	Mixing unit
PU 560.12. A+B	12 kg	1 metal bucket of 10 kg and 2 PE-bottles hardener of 1 kg
PU 560.6 A+B	6 kg	1 PE-bucket of 5 kg and 1 PE-bottle hardener of 1 kg
PU 560.1,5 A+B	1.5 kg	1.25 kg PE can for base component and 1 PE-bottle hardener of 250 g

Larger containers (bucket, barrels etc.) or special settings on request.

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 18 months from date of production (the printed expiry date is decisive).
Over storage time, viscosity increases and reactivity decreases.

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.