

VYBOND-PU 2K

TWO-COMPONENT POLYURETHANE STRUCTURAL ADHESIVE

Solvent-free, fast-curing 2K polyurethane adhesive engineered for structural corner bonding, reinforcement and sealing of window and door profiles, as well as general-purpose bonding of compatible wood, plastics, stone and metals.

Product Description

VYBOND-PU 2K is an environmentally considerate, solvent-free, two-component polyurethane structural adhesive. It combines rapid strength development with high hardness, strong adhesion, toughness and ageing resistance. The thixotropic mixed adhesive is suitable for vertical application and can be dispensed from dual cartridges or automated bulk equipment.

Key Benefits

- Fast cure and rapid initial strength development
- High hardness and structural strength with good toughness
- Non-sag performance for vertical joints
- 1:1 volume mixing ratio for controlled dispensing
- Smooth extrusion; stated extrusion rate 60–150 g/min
- Service temperature range from –40°C to +100°C

Typical Applications

- Corner joint bonding of window and door profiles, providing structural reinforcement and sealing
- General bonding of compatible wood, plastics, stone and metals
- Industrial assembly using dual-cartridge or automated metering and mixing equipment

Technical Data — Components

Property	Test method	Specification	Typical value
Part A colour	Visual	White	White
Part A viscosity, Brookfield No. 7 / 10 rpm	GB/T 2794	250,000–280,000 mPa·s	260,000 mPa·s
Part A density	GB/T 13354	1.60 ± 0.10 g/cm ³	1.60 g/cm ³
Part B colour	Visual	Beige	Beige
Part B viscosity, Brookfield No. 7 / 10 rpm	GB/T 2794	240,000–280,000 mPa·s	260,000 mPa·s
Part B density	GB/T 13354	1.75 ± 0.10 g/cm ³	1.75 g/cm ³

Technical Data — Mixed Adhesive

Property	Test method	Specification	Typical value
Mixing ratio, A:B	Volume ratio	1:1	—
Colour	Visual	White / grey	White / grey
Viscosity, Brookfield No. 7 / 10 rpm	GB/T 2794	245,000–280,000 mPa·s	260,000 mPa·s
Density	GB/T 13354	1.68 ± 0.10 g/cm ³	1.68 g/cm ³
Working time	Internal	≥ 15 min (adjustable)	25 min
Vertical sag	GB/T 13477	≤ 3 mm	0 mm

Technical Data — Cured Adhesive

Property / condition	Test method	Specification	Typical value
Shore D hardness — 1 h	GB/T 531	—	0
Shore D hardness — 2 h	GB/T 531	—	0
Shore D hardness — 3 h	GB/T 531	—	8

Property / condition	Test method	Specification	Typical value
Shore D hardness — 4 h	GB/T 531	—	13
Shore D hardness — 5 h	GB/T 531	—	28
Shore D hardness — 24 h	GB/T 531	≥ 60	84
Aluminium–aluminium shear strength — 24 h	GB/T 7124	≥ 2 MPa	12 MPa
Aluminium–aluminium shear strength — 7 d	GB/T 7124	≥ 3 MPa	13 MPa
Bending deformation	GB/T 2567	≥ 4	> 6 (breakable)
Service temperature	Internal	–40°C to +100°C	—

Test conditions: Typical values reported at 25°C.

Application Instructions

Surface preparation. Bonding surfaces must be clean, dry, sound and free from dust, oil, grease and other contaminants. Verify adhesion and material compatibility on representative substrates before production use. Surface treatment or primer may be required for certain plastics, coated metals or low-surface-energy materials.

Dual cartridge. Fit the approved static mixer to the 2 × 300 mL cartridge. Dispense and discard the first 8–10 cm of adhesive bead to ensure a homogeneous mix. Apply within the working time, assemble the parts and maintain alignment or clamping until sufficient handling strength has developed.

Bulk application. Bulk packs may be used with compatible automatic 1:1 metering, mixing and dispensing equipment. Confirm ratio accuracy and mixing quality before use.

Curing. Cure rate and working time depend on substrate temperature, ambient conditions, joint dimensions and material temperature. Do not disturb the joint until adequate handling strength is achieved.

Packaging

Pack type	Configuration
Dual cartridge	600 mL set (2 × 300 mL); 12 sets/carton
Drum	55 US gal/drum; confirm Part A/Part B supply configuration before ordering

Storage and Shelf Life

Shelf life is 6 months from date of manufacture when stored unopened in a cool, dry place at +8°C to +28°C. Protect from moisture, direct sunlight, frost and excessive heat. Reseal partially used containers immediately to prevent moisture uptake. Storage outside the stated conditions may reduce shelf life or affect product performance.

Health and Safety

For professional use only. Use in a well-ventilated area and wear suitable protective gloves and eye protection. Avoid skin and eye contact. In case of contact, rinse immediately with plenty of water and seek medical advice when necessary. Keep out of reach of children. Consult the current Safety Data Sheet before handling, storage or disposal.

Limitations

- Do not apply to wet, contaminated, frozen or unstable substrates.
- Compatibility and adhesion must be confirmed by trial, particularly on plastics, coated surfaces and natural stone.
- Not intended for structural design calculations unless performance has been verified for the actual substrates, joint geometry, cure conditions and applicable standard.
- Working time and cure development vary with temperature and site conditions.

Technical Note

Values shown as “typical” are representative laboratory results and are not guaranteed minimum values. Specifications and application details may be updated as part of continuous product development. The user is responsible for determining suitability for the intended application. For project-specific requirements, contact VYKOL Technical Service.