

Technical Data Sheet

Winbond PUR Sealer (PU 50) — Single-Component Polyurethane Adhesive/Sealant

Technical data based on manufacturer TDS Version 9, dated 23-06-2023. Distributed in the UK by Winbond International Ltd.

DESCRIPTION

PU 50 is a single-component, fast-curing, polyurethane-based elastomeric sealant. It forms a joint of high elasticity and has good resistance to tear and to weather.

PU 50 carries CE marking for the following applications:

- Sealant for facade elements for interior and exterior applications, usable in cold climate, according to European Standard EN 15651-1 (F EXT-INT CC).
- Sealant for pedestrian walkways for interior and exterior applications, usable in cold climate, according to European Standard EN 15651-4 (PW EXT-INT CC).

This product has a fire resistance certificate according to the European directive on marine equipment in force (Marine Equipment "wheelmark" module, notified body 2690). Indoor air emissions class A+. NSF Nonfood Compounds Program listed R2 (white/grey colours).

AREAS OF APPLICATION

PU 50 is specially adapted for bonding various materials used in general industry and the transportation market (automotive, bus, truck, recreational vehicles, campervan conversion, etc.), as well as for expansion joints and sealing applications. Use of this sealant also helps reduce vibrations and prevent corrosion.

PU 50 adheres well to most commonly used substrates such as plywood, anodized aluminium, coated metals, steel, polyester (GRP) and concrete.

However, due to the large variety and quality of these substrates as well as installation conditions, preliminary tests are recommended on all materials — especially difficult ones such as plastics (PVC, ABS, PMMA), bare aluminium or coated metals — to determine whether surface preparation is necessary.

TECHNICAL DATA

Appearance	Pasty
Colour	Black, white, grey (contact us for other available colours)
Density at 20°C	Black: 1.15 ± 0.02 — Others: 1.16 ± 0.02
Sagging (ISO 7390)	< 3 mm
Application temperature	+5 to +35°C
Skin formation time at 23°C and 50% RH	Approx. 60 min *
Cure time at 23°C and 50% RH	4 mm after 24 h
Shore A hardness (internal method IT-20 after ISO 868 – 3 seconds)	Approx. 45 after 14 days
Modulus at 100% (ISO 37)	Approx. 0.8 MPa
Modulus at break (ISO 37)	Approx. 2.0 MPa

Elongation at break (ISO 37)	> 700%
Tear strength (ISO 34)	Approx. 12 N/mm
Temperature resistance	-40 to +90°C (on cured sealant)
Resistance to dilute acids and bases	Average
UV resistance	Good
Weatherability	Excellent
Compatibility with paints (on cured sealant)	Water-based paints: yes. Solvent-based paints: carry out tests beforehand.
Specific data	NSF R2 registration (grey and white colours)

** This time depends on hygrometry and ambient temperature. To ensure good adhesion, it is mandatory to carry out bonding before the product has formed its skin.*

INSTRUCTIONS FOR USE

Substrate preparation:

Substrates must be clean, even, dry, dust-free and free of grease or other contaminants that could harm bonding. If substrates need cleaning, use methylethylketone (MEK), acetone or a suitable degreaser; for materials sensitive to ketones, use ethanol. Check compatibility with the substrates. If necessary, apply a primer — contact Winbond technical support for advice.

It is recommended to rub down concrete (particularly cement film residue) with a metal brush, then remove the dust. If necessary, rub down metallic surfaces beforehand (especially where oxidation is present); after rubbing down, clean with a solvent and allow to dry for at least 10 minutes. Note: when using solvents, extinguish all sources of ignition and carefully follow the safety and handling instructions given by the manufacturer.

Caulking:

PU 50 can be applied with a manual or pneumatic gun. After application, use a putty knife to smooth the joint with soapy water.

Over-painting:

Cured PU 50 is overpaintable with water-based paints. For solvent-based paints, carry out compatibility tests beforehand.

Cleaning:

Tools can be cleaned with methylethylketone (MEK) or acetone before the sealant has completely cured. After curing, removal by abrasion is necessary.

LIMITATIONS

- Use the product within 24 hours of opening the packaging; otherwise the sealant may cure.
- Do not apply at temperatures below 5°C.
- Avoid any contact with non-cured MS, hybrid PU or silicone sealants, and with alcohols or ammonia, during curing.

CONSUMPTION

300 ml cartridge:

Diameter of the cannula	2	3	4	5	6	7	8	9	10
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(mm)									
Length (linear metres)	95	42	24	15	10.5	7.5	5.5	4.5	3.5

600 ml sausage:

Diameter of the cannula (mm)	2	3	4	5	6	7	8	9	10
Length (linear metres)	190	85	47	30	21	15	11	9	7

For information purposes only; dependent on bonding conditions (surface state, substrates, etc.).

STORAGE AND SHELF LIFE

12 months in closed original packaging stored at a temperature below 25°C. In cold weather, store the packaging at about 20°C before use.

PACKAGING

Supplied by Winbond International as 300 ml cartridges and 600 ml foil sausages. Contact us for other packaging options.

SAFETY

Read the Safety Data Sheet before use. The Winbond PUR Sealer (PU 50) SDS is available at www.winbond-int.com or on request from sales@winbond-int.com.

The technical data contained herein is based on present knowledge and experience and we cannot be held liable for any errors, inaccuracies or omissions resulting from technological changes or research between the date of issue of this document and the date the product is acquired. Before using the product, the user should carry out any necessary tests to ensure the product is suitable for the intended application. All users should contact the seller for additional technical information concerning its use. The information detailed in the present technical data sheet is given by way of indication and is not exhaustive.