

ONEBOND PU SEAL 50

Description

OneBond PU Seal 50 is a one-part, moisture cured, solvent free polyurethane based sealant and medium strength adhesive, designed for car body construction and repair (seam sealing). It is UV stable and therefore suitable for interior and exterior applications. Specifically developed to meet the requirements of the automotive industry thanks to its balanced viscosity, OneBond PU Seal 50 can easily be brushed and tooled in order to match the original mark. Once cured, the product becomes very hard, giving an OEM appearance to the material. OneBond PU Seal 50 also has outstanding mechanical properties and durability, is non-conductive and provides corrosion protection. It has excellent adhesion to Glass Fiber Reinforced Plastics, thermoplastics (ABS, PC, PVC), metals, coated metals, concrete, wood and glass, even without primer.

Features and Benefits

- Skin time 45 min at 23°C/50%RH, ideal for sealing large areas
- It is completely odourless
- Painting time: from 2 hours to 24 hours at 23°C/50%RH
- The adhesive can be sanded after 24 hours at 23°C/50%RH
- Application temperature +15°C – +25°C
- Can withstand temperatures of up to +100°C
- Can be spot-welded within fixture-time
- Thixotropic, does not sag
- Vibration and sound dampening
- Shelf life of 12 months when stored in original containers at 10°C - 25°C.

Typical component properties⁽¹⁾

	Unit	One-component Polyurethane
Appearance		Black
Odor		Odorless
Density @+25°C	g/ml	1,4
Viscosity @+25°C	cP	Thixotropic paste

1: These are typical values and should not be construed as specifications.

Typical curing properties⁽¹⁾

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	Unit	
Curing mechanism	Moisture curing	
Curing through volume @23°C / 50% RH, 24 hours	mm	3,5
Skin-time @10°C / 30% RH	Minutes	90
Skin-time @23°C / 50% RH	Minutes	45
Skin-time @40°C / 80% RH	Minutes	10

Typical curing properties⁽¹⁾

	Unit	
Tooled, brushed within the skin-time	Yes	
Painting time @23°C / 50% RH	Hours	After 1 – before 24
Sanding time @23°C / 50% RH	Hours	24
Full cure time @23°C / 50% RH	Hours	24

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Typical properties of the cured material⁽¹⁾

	Unit	Mixture	Test Method
Tensile Strength @+23°C	MPa	30	DIN 53504
Young's Modulus @+23°C	MPa	2	DIN 53504
Elongation at Break @+23°C	%	450	DIN 53504
Tear Strength @+23°C	N/mm	8,5	
Hardness Shore A		50	ASTM 2240

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Lap Shear Strength⁽¹⁾⁽²⁾

Substrate	Unit	Mixture	Test Method
Cold Rolled Steel (1,5mm)	N/mm²	xx ⁽³⁾	ISO 4587
6111 Aluminium Alloy (0,9mm)	N/mm²	xx ⁽³⁾	ISO 4587

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2: Test Conditions: preparation: Solvent wipe, PU Primer, Cure: 7 days at 23°C, Test temperature: 23°C, Crosshead speed: 13mm/min.

3: Cohesive failure of the adhesive.

Application

When the adhesive has not yet hardened, it can be removed using a cloth. Once hardened, the product can only be removed mechanically.

The surface to be bonded or sealed must be perfectly clean, dry and free from dust and grease.

It can be applied with OneBond OM340-18 manual caulking gun or with OneBond OP34PI and OneBond OP34A pneumatic guns.

Packaging

Aluminum cartridges 310ml - 12 pieces per box

Storage⁽⁴⁾

	Unit	One-component Polyurethane
Recommended temperature	°C	10 - 25
Storage stability / Shelf life (4)	Months	12

4: Stored in the original sealed containers at the recommended temperature.

Safety Considerations

Safety Data Sheets (SDS) are available from OneBond. SDS include information regarding the physical, health and environmental health hazards, safety precautions, for products handling, storing and disposal. SDS are available in the language of the country or area of destination and may include locally applicable health and safety regulations. SDS are updated regularly and can be downloaded from www.onebondadhesives.com. OneBond encourages users to review the up-to-date SDS before handling or using any product.

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