

ONEBOND PU PLASTIC FAST 90 SEC

Description

OneBond PU Plastic Fast 90 Seconds is an ultra-low emissions two-component polyurethane adhesive designed for bonding and gap filling in car body repair. It repairs cracks, scratches, and holes in automotive exterior plastic parts, including bumpers, spoilers, tailgates, and side mirrors. It is suitable for metals, coated metals, and plastics (except for polyethylene, polypropylene, and Teflon). It can be sanded and painted quickly and has good impact resistance. It can also be used on assemblies to bond window brackets, trim parts, and mounting brackets on headlamps and tail lamps. It is suitable to be spot welded through while curing.

Typical component properties⁽¹⁾

	Unit	Resin (Component A)	Hardener (Component B)
Chemical type:		Isocyanate prepolymer	Polyol mixture
Appearance:		White viscous liquid	Black viscous liquid
Density @+25°C:	g/ml	1,25	1,29
Viscosity @+25°C:	cP	50.000	50.000

	Unit	Mixture
Appearance:		Dark grey
Density @+25°C:	g/ml	1,27
Mix ratio by Volume:	R:H	1:1
Mix ratio by Weight:	R:H	1:1

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

Typical curing properties⁽¹⁾

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	Unit	Mixture
Open time	Min	1,5
Sanding time	Min	10
Fixture time	Min	5

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

Typical properties of cured material⁽¹⁾

	Unit	Mixture	Test method
Shore D Hardness		75	EM ISSO 868
Tensile Strength	MPa	25	DIN 53504
Tensile Elongation	%	60	DIN 53504
Glass Transition Temperature	°C	45 to 50	ASTM E 1640

Lap Shear Strength:

Substrate	Pre-treatment	Unit	Mixture	Test method
Aluminum	IPA + P120 + IPA	MPa ⁽²⁾	>10	ISO 4587
Steel	IPA + P120 + IPA	MPa ⁽²⁾	>10	ISO 4587
PMMA	IPA + P120 + IPA	MPa ⁽⁴⁾	2,5	ISO 4587
ABS	IPA + P120 + IPA	MPa ⁽³⁾	3,5	ISO 4587
PVC	IPA + P120 + IPA	MPa ⁽⁴⁾	3,5	ISO 4587
PC/ABS	IPA + P120 + IPA	MPa ⁽³⁾	3,5	ISO 4587
Wood	IPA + P120 + IPA	MPa ⁽²⁾	9	ISO 4587
PP/EPDM	IPA + P120 + IPA	MPa ⁽⁴⁾	1,5	ISO 4587
PP	Acetone + P120 + Acetone	MPa ⁽²⁾	1,5	ISO 4587
PA 6	IPA + P120 + IPA	MPa ⁽³⁾	3	ISO 4587

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Glass	IPA + P120 + IPA	MPa ⁽⁴⁾	3,5	ISO 4587
Bondline thickness of 1 mm				
(1): These are typical values and should not be construed as specifications.				
(2): Cohesive failure of the adhesive.				
(3): Adhesive failure of the adhesive.				
(4): Mixed failure				

ONEBOND PU PLASTIC PRIMER

OneBond PU Plastic Primer is a sprayable primer packed in 200 ml pressurised cans designed for the preparation of plastic surfaces. It improves the adhesion of **OneBond PU Plastic Fast 90 Seconds** even on low surface energy plastics such as polypropylene (PP) and PP/EPDM blends.

General instructions for use

For assemblies:

Use gloves to minimise skin contact with the adhesive. Do not use solvents or thinners to clean the hands.

Remove all surface contaminants such as oxide, oil, grease, dust any other contaminants that can affect adhesion.

Clean and degrease the surface with a suitable cleaner and allow drying before applying the adhesive.

For plastics, it is recommended to mechanically abrade the surface using P120 grit paper/disc and thoroughly clean the substrate to remove dust and contaminants. The long-term bonding strength depends on the preparation of the bonded surfaces.

Apply OneBond PU Plastic Primer to enhance the adhesion of **OneBond PU Plastic Fast 90 Seconds** to thermoplastic materials (PMMA, SAN, ABS, PP, PA, TPU, rigid PVC).

The cartridge ensures the correct mixed ratio of the two components. Remove the cartridge cap and expel a small amount of adhesive to be sure both parts flow evenly and freely.

Attach the mixing nozzle to the end of the cartridge and begin dispensing the adhesive.

The first 2 to 4 cm of applied material should be discarded as it may be off ratio. Once well-mixed, the product has a uniform dark grey colour and is pasty and glossy.

Apply the desired amount of adhesive on one of the substrates to be bonded and assemble both parts. The components must be assembled within the open time of the adhesive.

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Applying constant pressure over the bond line with clamps is recommended until the fixture time is reached.

The open time and fixture time is influenced by the application temperature and the bonding thickness: the hardening reaction speed increases with the temperature and the amount of material applied, making this reaction exothermic. The amount of heat the resin/hardener blend develops is directly proportional to the amount of material applied and the adhesive curing speed.

Once finished, close the cartridge cap to prevent contamination of the unused product, and dispose of the static mixer. Static mixers are single-use. Additional static mixers can be ordered from ONEBOND

For cracks repair on plastic exterior parts (Bumpers):

Sand the damaged area with P40 grit paper/disc to improve the surface roughness and clean the surface.

Apply a layer of OneBond PU Plastic Primer and let the primer dry for 5 minutes.

Apply the desired amount of **OneBond PU Plastic Fast 90 seconds** adhesive on top of the damaged surface and spread the product with a spatula. Wait **10 minutes** for the product to dry.

Sand the surface initially with 80-grit paper/disc and then with 180-grit paper/disc, removing the excess of material. Finally, clean the surface, ensuring it is ready for painting.

For structural repair on plastic exterior parts (Bumpers – Crack on the edge):

Exterior: Make a V-shaped groove with a cutting disc, sand the surface with P40 grit paper/disc, drill holes around the edge and clean the surface.

Interior: sand the damaged area with P40 grit paper/disc to improve the surface roughness and clean the surface.

Interior and Exterior: Apply a layer of OneBond PU Plastic Primer and let the primer dry for 5 minutes.

Interior: Apply the desired amount of **OneBond PU Plastic Fast 90 Seconds** on the glass-fibre side of the reinforced PVC film (78072765591) and place it on top of the damaged surface. Wait **10 minutes** for the product to dry, then peel off the PVC film.

Exterior: Apply a layer of **OneBond PU Plastic Fast 90 Seconds** on the surface, spread the product with a spatula, place a piece of a non-reinforced PVC film (78072765590) on top and apply pressure with the hand. Wait **10 minutes** for the product to dry, then peel off the PVC film.

Exterior: Sand the surface initially with 80-grit paper/disc and then with 180-grit paper/disc, removing the excess material. Finally, clean the surface, ensuring it is ready for painting.

For structural repair on plastic exterior parts (Bumpers – Internal):

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Exterior: Sand the damaged surface with P40 grit paper/disc, clean the surface and cover the crack with marking tape.

Interior: Sand the damaged area with P40 grit paper/disc to improve the surface roughness and clean the surface.

Interior and Exterior: Apply a layer of OneBond PU Plastic Primer and let the primer dry for 5 minutes.

Interior: Apply the desired amount of **OneBond PU Plastic Fast 90 Seconds** on the glass-fibre side of the reinforced PVC film (78072765591) and place it on top of the damaged surface. Wait **10 minutes** for the product to dry, then peel off the PVC film.

Exterior: Apply a layer of **OneBond PU Plastic Fast 90 Seconds** on the surface, spread the product with a spatula, place a piece of a non-reinforced PVC film (78072765590) on top and apply pressure with the hand. Wait **10 minutes** for the product to dry, then peel off the PVC film.

Exterior: Sand the surface initially with 80-grit paper/disc and then with 180-grit paper/disc, removing the excess material. Finally, clean the surface, ensuring it is ready for painting.

For brackets repair:

Mark with a pen the exact area where the hole will be located (the adhesive will hide the hole).

Clean the surface, sand with a 40-grit paper/disc and clean the surface once again.

Drill holes around the repair area to improve the mechanical anchoring of **OneBond PU Plastic Fast 90 Seconds**.

Apply a layer of OneBond PU Plastic Primer and let the primer dry for 5 minutes.

As a next step, apply the desired amount of **OneBond PU Plastic Fast 90 Seconds** on the glass-fibre side of the reinforced PVC film (78072765591) and place it on top of the damaged surface, applying pressure. Wait **10 minutes** for the product to dry, then peel off the PVC film.

Remove the excess cured material with a cutter and drill a new hole in the marked area.

Packaging

Cartridge 50 ml – 20 pieces per box.

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Storage

	Unit	
Recommended temperature	°C	5 – 35
Storage stability / Shelf life	Months	24
1: Stored in the original sealed containers at the recommended temperature in a dry place.		

Safety Considerations

Safety Data Sheets (SDS) are available from OneBond. SDS includes information regarding the physical, health, and environmental health hazards and safety precautions for handling, storing and disposal of products. 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.

Customer Notice

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