

# Polyurethane Adhesives

**Permabond Polyurethane adhesives are manufactured to meet the growing demands of industrial engineers. Polyurethanes form resilient bonds to a variety of substrates. Products are available with different set times to suit production requirements. These black adhesives provide virtually invisible bonds on black leather, carbon fibre and rubber.**

## Two Component Polyurethane (PT)

Polyurethanes are ideal for many bonding applications including bonding composites, plastics, leather etc... in automobiles. Products are available with long working life to allow use on large bonding and potting areas.

These products exhibit low shrinkage (so ideal for bonding thin “skins” or metal or laminate without show-through). Permabond polyurethanes are available with varying set times to meet processing needs. Products are available with pot life times ranging from 1 to 15 minutes. The black color suits black leather, carbon fiber, and rubber.

## Permabond Two Component Polyurethanes form strong bonds to:

- ▶ Metals
- ▶ Wood
- ▶ FRP
- ▶ Glass
- ▶ Plastics
- ▶ Leather
- ▶ Rubber

## Benefits of Permabond Polyurethanes include:

- ▶ Various Set Times
- ▶ Adhesion to a Variety of Substrates
- ▶ No primer needed
- ▶ Good Tensile Strength
- ▶ Ease of Application
- ▶ Resilient Bonds



## Permabond Polyurethane Adhesive Comparison Chart

This table represents a selection of the complete range of Permabond adhesives. For more detailed technical information and product Safety Data Sheets, visit [permabond.com](http://permabond.com). To discuss your specific application requirements, please call Permabond and our technical advisors will recommend the best adhesive for you or discuss the development of a new grade or product modification to meet your technical requirements.

Polyurethane - Two Component			
Grade	PT321	PT326	PT328
Description	Fast, Strong	Moderate Pot Life	Extended Pot Life
Color Part A	Black	Black	Black
Color Part B	Cream	Cream	Cream
Viscosity Part A cP (mPa.s)	4000-8000	4000-8000	4000-8000
Viscosity Part B cP (mPa.s)	3000-6000	3000-6000	3000-6000
Specific Gravity Part A	1.25	1.25	1.25
Specific Gravity Part B	1.45	1.45	1.45
Mix Ratio	1:1	1:1	1:1
Bond Gap Fill	0.2in. (5mm)	0.2in. (5mm)	0.2in. (5mm)
Pot Life	1 - 1.5 min	4 - 7 min	15 - 20 min
Handling Strength	10 - 15 min	60 - 90 min	90 - 120 min
Full Strength cured @ 23°C	24 hours	4-5 days	4-5 days
Full Strength cured @ 90°C	30 min	30 min	30 min
Hardness	D 70 - 80	D 65 - 75	D 60 - 75
Elongation	<10%	<15%	<20%
Shear Strength Grit Steel	2600-3600 psi (18 - 25 N/mm <sup>2</sup> )	1700-2900 psi (12 - 20 N/mm <sup>2</sup> )	1700-2600 psi (12 - 18 N/mm <sup>2</sup> )
Tensile Strength	2900-3600 psi (20 - 25 N/mm <sup>2</sup> )	2300-3600 psi (16 - 25 N/mm <sup>2</sup> )	2200-2900 psi (15 - 25 N/mm <sup>2</sup> )
Temperature Range	-40 to 248 °F (-40 to +120 °C)	-40 to 248 °F (-40 to +120 °C)	-40 to 248 °F (-40 to +120 °C)

Strength results will vary depending on the level of surface preparation and gap.

For full technical information, please refer to the TDS (Technical Data Sheet)

# Permabond® Technologies

## Anaerobics

Thread lockers, Thread sealants, FIP Gasketmakers, Retaining Compounds

## Cyanoacrylates

Instant adhesives, for rapid bonding of metals, plastics, rubber, and more.

## Epoxies

Two-part (ET), Single-part (ES), and Modified Technology (MT) grades are available.

## MS-Polymers

Single-part, moisture-curing, flexible sealants

## Polyurethanes

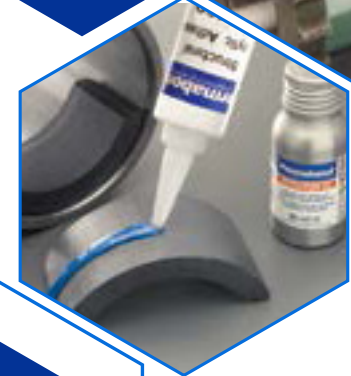
Two-part room temperature curing adhesives

## Toughened Acrylics

Rapid curing, high strength structural adhesives

## UV Light Cured Adhesives

For glass, plastic, and metal with dual cure options.



PERMABOND.COM



[info.americas@permabond.com](mailto:info.americas@permabond.com)

[info.europe@permabond.com](mailto:info.europe@permabond.com)

[info.asia@permabond.com](mailto:info.asia@permabond.com)

Americas - 800-640-7599 (732-868-1372)

Europe - 0800 975 9800 (+44 (0) 1962 711661)

Asia + 86 21 5773 4913

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