

# Cyanoacrylates

Permabond cyanoacrylate adhesives bring a wide variety of performance benefits to the production environment. These benefits include joining dissimilar and hard-to-bond materials, quick curing with very strong adhesion and a wide range of viscosities. Permabond one-part cyanoacrylates are a versatile solution for even the most demanding manufacturing and assembly applications.

## **How do Permabond cyanoacrylate adhesives work?**

Permabond cyanoacrylate adhesives are one-part adhesives that cure by reacting with minute traces of moisture on the surface of the material being bonded. Permabond cyanoacrylates cure in seconds at ambient temperatures and have been formulated to bond flexible or rigid surfaces made from a wide range of plastics, rubbers or metals.

Permabond cyanoacrylates are available in a range of viscosities and material adhesion capabilities. These adhesives are formulated to bond a variety of porous and non-porous surfaces and adhere to rigid or flexible materials.

## **Permabond Primers and Accelerators**

- Permabond POP enhances adhesion to polyolefins.
- Permabond surface activators pre-treat acidic surfaces to facilitate and speed cure. They can also be used post application to quickly cure any exposed cyanoacrylate to eliminate blooming.

## **Permabond low and medium viscosity cyanoacrylate formulations provide:**

- Superior bonding to plastic, wood and rubber materials.
- Excellent bond strength when joining metal to plastic, or rubber to metal.
- Inherent corrosion resistance; protects part assembly from degradation.

## **Permabond high viscosity cyanoacrylate adhesives provide:**

- Formulations for use in vertical applications or on porous surfaces.
- Gap filling ability up to 0.5mm (.02 in.)
- Fast, 30-second cure time; speeds production rates.
- High-strength adhesion, up to 25MPa; shear strength exceeds that of many substrate materials.

## **Benefits**

- One-part adhesive chemistry speeds application.
- Join dissimilar materials, such as rubber to metal, with no compromise in bond strength.
- Cures in seconds at room temperature; eliminates need for costly jigs or ovens; accelerates assembly rates.
- Gap fill up to 0.5mm (.02 in.)
- Solvent free; non flammable.
- Superior bond strength; often exceeds that of substrate material.
- High-temperature resistance of up to 250°C (480°F)
- Non-blooming, low odour, improves worker comfort.
- Impact resistant grades increase durability.



**Permabond**<sup>®</sup>  
Engineering Adhesives

## Permabond Cyanoacrylate Adhesives Comparison Chart

Grade	Description	Viscosity mPa.s = cP	Maximum Gap Fill (mm) in	Shear Strength Steel (N/mm <sup>2</sup> ) psi	Set Time Steel in secs	Service Temperature (°C) °F	Availability
101	Low viscosity, penetrating grade	1-3	(0.05) 0.002	(21) 3050	3-5	(-55 to +80) -65 to +180	Worldwide
102	General purpose	70-90	(0.15) 0.006	(21) 3050	10-15	(-55 to +80) -65 to +180	Worldwide
105	Difficult rubbers (e.g. EPDM)	30-50	(0.10) 0.004	(20) 2900	10-15	(-55 to +80) -65 to +180	Worldwide
108	Intermediate gap fill, plastic bonding	400-600	(0.20) 0.008	(21) 3050	10-15	(-55 to +80) -65 to +180	Americas & Asia
170	Metal bonding, maximum gap fill	1000-2000	(0.38) 0.015	(24) 3500	15-20	(-55 to +90) -65 to +195	Americas & Asia
240	High viscosity, slow cure	1500-2500	(0.43) 0.017	(23) 3300	15-20	(-55 to +80) -65 to +180	Worldwide
268	Fast curing, intermediate gap fill	1500-2000	(0.40) 0.016	(21) 3050	10-15	(-55 to +80) -65 to +180	Americas & Asia
731	Flexible, toughened	100-200	(0.15) 0.006	(27) 3950	30-50	(-55 to +120) -65 to +250	Worldwide
735	Flexible, toughened, black	200-300	(0.15) 0.006	(27) 3950	30-50	(-55 to +120) -65 to +250	Worldwide
737	Flexible, toughened, black, max. gap fill	2000-4000	(0.50) 0.020	(21) 3050	25-30	(-55 to +120) -65 to +250	Worldwide
790	Ultra fast cure, wicking type	1-3	(0.05) 0.002	(20) 2900	2-3	(-55 to +80) -65 to +180	Americas & Asia
791	Ultra fast cure, low viscosity	30-50	(0.10) 0.004	(20) 2900	2-3	(-55 to +80) -65 to +180	Worldwide
792	Ultra fast cure, general purpose	70-90	(0.15) 0.006	(20) 2900	2-3	(-55 to +80) -65 to +180	Worldwide
795	Ultra fast cure, general purpose	400-600	(0.18) 0.007	(20) 2900	3-5	(-55 to +80) -65 to +180	Americas & Asia
798	Ultra fast cure, intermediate gap fill	1500-2500	(0.43) 0.017	(21) 3050	5-10	(-55 to +80) -65 to +180	Americas & Asia
799	Ultra fast cure, maximum gap fill	4000-6000	(0.50) 0.020	(21) 3050	5-10	(-55 to +80) -65 to +180	Americas & Asia
801	High temperature resistance	30-40	(0.08) 0.003	(21) 3050	10-15	(-55 to +130) -65 to +270	Worldwide
802	High temperature resistance	90-110	(0.15) 0.006	(21) 3050	10-15	(-55 to +160) -65 to +320	Worldwide
820	High temperature resistance	90-110	(0.15) 0.006	(21) 3050	10-15	(-55 to +200) -65 to +390	Worldwide
910	Metal bonding	70-90	(0.15) 0.006	(26) 3750	5-10	(-55 to +90) -65 to +195	Worldwide
910FS	Metal Bonding, wicking type	1-5	(0.05) 0.020	(26) 3750	3-5	(-55 to +90) -65 to +195	Americas & Asia
919*	High temp. resistance, wicking	1-5	(0.05) 0.020	(21) 3050	10-15	(-55 to +250) -65 to +480	Americas & Asia
920*	High temp. resistance	70-90	(0.15) 0.006	(21) 3050	10-15	(-55 to +250) -65 to +480	Worldwide
922*	High temp. resistance, max gap fill	1500-2000	(0.43) 0.017	(21) 3050	10-15	(-55 to +250) -65 to +480	Americas & Asia
940	Low odour, low bloom	5-10	(0.05) 0.020	(18) 2600	10-15	(-55 to +80) -65 to +180	Worldwide
941	Low odour, low bloom	20-40	(0.08) 0.003	(18) 2600	10-15	(-55 to +80) -65 to +180	Worldwide
943	Low odour, low bloom	90-110	(0.15) 0.006	(18) 2600	10-15	(-55 to +80) -65 to +180	Worldwide
947	Low odour, low bloom	1000-1500	(0.25) 0.010	(18) 2600	20-30	(-55 to +80) -65 to +180	Worldwide
2010	Very fast cure, thixotropic	21,000-25,000	(0.50) 0.020	(21) 3050	10-15	(-55 to +80) -65 to +180	Worldwide
2011	Non-drip, non sag gel	Gel	(0.50) 0.020	(22) 3200	5-10	(-55 to +80) -65 to +180	Worldwide
2050	Flexible - Excellent resistance to low temperature	1000 - 2000	(0.20) 0.008	(18) 2600	10-15	(-30 to +85) -22 to +185	Europe, Middle East & Australia

POP - Polyolefin primer increases adhesion. Accelerators QFS 16, CSA and non-flammable CSA-NF increase cure speed especially on acidic surfaces.  
 \*To achieve max. temp. resistance a secondary heat cure is required. • Full strength is generally achieved in 24 hours. See data sheets for more detail.

### Permabond Worldwide

Wherever your manufacturing or R&D site may be located, Permabond representatives can be called upon to assist you. We have an extensive network of professional distributors worldwide.



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