

WATER RESISTANT CYANOACRYLATE - 712

Chemical Concepts[™]
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Permabond 712 cyanoacrylate adhesive offers superior bonding performance in harsh environmental conditions, including underwater submersion, heat and humidity.

Conventional cyanoacrylates are prone to weakening with long exposure to water and moisture, especially when the liquid is hot. Not so with 712! During testing, it maintained 75% strength even after 1,000 hours of exposure to 60°C water, and 90% strength during 85/85 testing (85°C and 85% relative humidity). These results demonstrate Permabond 712's ability to withstand adverse conditions while offering maximum performance. The adhesive also offers great chemical resistance, and will withstand exposure to oils, solvents and other chemical substances.

Permabond 712 is a low viscosity, solvent free, easy to dispense adhesive that cures fast at room temperature, forming strong bonds to a wide variety of substrates.



KEY FEATURES:

- ▶ Bonds withstand water & moisture exposure
- ▶ Passes 85°C-85% RH
- ▶ Great chemical & environmental resistance
- ▶ Rapid cure
- ▶ Bonds well to many substrates
- ▶ Excellent adhesion to rubber
- ▶ Easy to dispense
- ▶ High strength performance
- ▶ Easy use - no mixing or heat cure
- ▶ Excellent thermal resistance
- ▶ Transparent, colorless
- ▶ Solvent free
- ▶ Low-viscosity

IDEAL FOR BONDING:

- ABS
- Acrylic
- Aluminum
- EPDM
- Mild Steel
- Nylon 6
- Nylon 6, 6
- PC
- Phenolic
- PVC
- Rubber
- Steel
- *And many more*





DESCRIPTION

The following technical data for Permabond 712 is a guideline and does not constitute a specification. For full technical information, please refer to the technical data sheet, available at www.permabond.com. Please contact Permabond to discuss your project.

	712
Description	Water & humidity-resistant ethyl cyanoacrylate
Appearance	Transparent
Features	Able to withstand continuous water & moisture exposure once bonded
Viscosity @ 25° C	100 mPa.s (cP)
Maximum gap fill	0.15mm (0.006 in)
Fixture time	Between 3 and 25 seconds, depending on the substrate
Full strength	24 hours
Service temperature	120°C (248°F)
Storage Temperature	Between 2 and 7°C (35 and 45°F)

THERMAL AGING		
Adhesion on abraded mild steel	100 hr at 120°C	80% Strength Retention
	500 hr at 120°C	50% Strength Retention

The tables to the left show the shear strength retained following Thermal Aging, Water (Chemical) Resistance, and Heat & Moisture Resistance testing.

WATER (CHEMICAL) RESISTANCE		
Adhesion on abraded mild steel	100 hr at 60°C	95% Strength Retention
	1000 hr at 60°C	75% Strength Retention

The lap shear specimens were all prepared and cured for 72 hours at 23°C, aged at the indicated conditions, and tested at 23°C.

HEAT & MOISTURE RESISTANCE		
Adhesion on abraded mild steel	170 hr at 85°C / 85% Relative Humidity	90% Strength Retention

With phenomenal performance under extreme conditions, Permabond 712 will stay strong whatever the weather.



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