PERMABOND® 751
Cyanoacrylate
Provisional Technical Datasheet

Features & Benefits

- Flexible - 150% elongation
- Keeps high elasticity over time
- 100% reactive – no solvents
- Bonds most materials
- Ideal for bonding medical devices

Approval

ISO 10993-5 Cytotoxicity

Description

PERMABOND® 751 is a flexible cyanoacrylate adhesive. It has good impact resistance and is suitable for bonding dissimilar materials which could be subject to thermal shock or thermal cycling. 751 is ideal for use on flexible surfaces and to maintain the compression properties of the joint over time.

Typical Physical Properties of Uncured Adhesive

Chemical composition	Ethyl cyanoacrylate
Appearance	Clear
Viscosity @ 25°C	150 mPa.s ***(cP)***
Specific Gravity	1.1

Typical Curing Properties

Maximum gap fill	0.15 mm ***0.006 in***
Fixture / handling time* (0.3 N/mm^2 shear strength is achieved)	5 seconds (Aluminium) 5 seconds (Mild Steel) 4 seconds (ABS) 2 seconds (NBR) 4 seconds (EPDM) 5 seconds (Paper) 5-20 seconds (Leather)
Full strength	24 hours

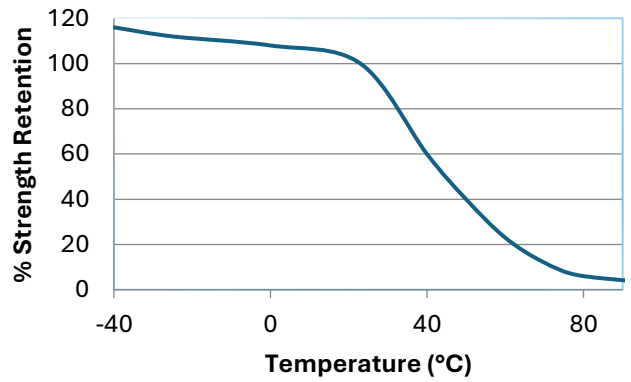
**Handling times can be affected by temperature, humidity and specific surfaces being bonded.*

Typical Performance of Cured Adhesive

Shear strength* (ISO 4587)	Mild Steel 13 N/mm2 ***(1885 psi)*** Aluminium 11 N/mm2 ***(1595 psi)*** PC 5 N/mm2 ***(725 psi)*** SF** PVC 4 N/mm2 ***(580 psi)*** ABS 7 N/mm2 ***(1015 psi)*** SF**
Elongation at break (ASTM D-638)	150%
Impact strength (ASTM D-950)	15 KJ/m^2 ***(7.1 ft-lb/in^2)***
Hardness (ISO 868)	80 Shore A

**Strength results will vary depending on the level of surface preparation and gap.*
***SF = Substrate failure*

Hot Strength



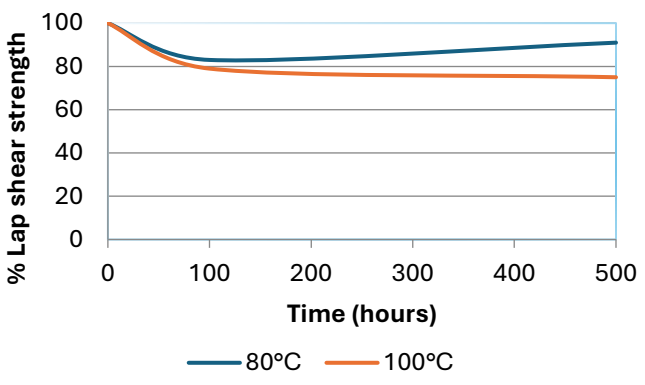
**"Hot strength" shear strength tests performed on grit-blasted mild steel. 24-hour cure at room-temperature and conditioned to pull-temperature for 30 minutes before testing.*

Permabond® 751 can withstand higher temperatures for brief periods (such as for paint-baking and wave soldering processes) provided the joint is not unduly stressed.

The information given and the recommendations made herein are based on our research and are believed to be accurate, but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.
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Heat Ageing



"Heat Ageing" shear strength tests performed on grit-blasted mild steel.

Chemical Resistance

Lap shear specimens aged and tested at room temperature		
Environment	**500h**	**1000h**
IPA	GBMS* 117%	GBMS* 86%
Ethanol	GBMS* 92%	GBMS* 40%
40°C/90% RH	PC 100%	PC 115%
Motor Oil	GBMS* 103%	GBMS* 103%
Gasoline	GBMS* 100%	GBMS* 110%

Grit-blasted mild steel.

Additional Information

This product is not recommended for use in contact with strong oxidizing materials and polar solvents, although will withstand a solvent wash without any bond-strength deterioration. Users are reminded that all materials, whether innocuous or not, should be handled in accordance with the principles of good industrial hygiene.
Full information can be obtained from the Safety Datasheet.

Storage & Handling

Storage Temperature	2 to 7°C ***(35 to 45°F)***
Allow adhesive to reach room temperature before opening to prevent condensation inside the bottle which can reduce shelf-life.	

This Technical Datasheet (TDS) offers guideline information and does not constitute a specification.

Surface Preparation

Surfaces should be clean, dry and grease-free before applying the adhesive. Use a suitable solvent (such as acetone or isopropanol) for the degreasing of surfaces.
Some metals such as aluminium, copper and its alloys will benefit from light abrasion with emery cloth (or similar) to remove the oxide layer.

Directions for Use

1. Apply the adhesive sparingly to one surface.
2. Bring the components together quickly and correctly aligned.
3. Apply sufficient pressure to ensure the adhesive spreads into a thin film.
4. Do not disturb or re-align until sufficient strength is achieved, normally within a few seconds.
5. Any surplus adhesive can be removed with Permabond® CA solvent, nitromethane or acetone.

NB:
If bonding polypropylene, polyethylene, PTFE or silicone, prime first with Permabond® Polyolefin Primer (POP). The use of POP may affect the adhesive's elongation.
751 will lose its flexibility when exposed to cyanoacrylate activators such as Permabond® C Surface Activator (CSA) or Permabond® QFS 16.

Video Links

Surface preparation:
https://youtu.be/8CMOMP7hXjU

Cyanoacrylate directions for use:
https://youtu.be/PiPzutdRmsk

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