PERMABOND 737

Cyanoacrylate

Technical Datasheet

Features & Benefits

- Good gap fill (up to 0.5mm / 0.02")
- Toughened and flexible
- Ease of use – no mixing or heat cure
- Black - so suitable for dark surfaces
- 100% reactive, no solvents

Description

PERMABOND 737 is a toughened cyanoacrylate with improved impact and peel strength for maximum flexibility. Its increased temperature resistance and dark colour make 737 suitable for a wide range of applications. It bonds rapidly to a variety of surfaces including aluminium, steel (both zinc-plated and uncoated), plastics and rubbers.

Physical Properties of Uncured Adhesive

Chemical composition	Ethyl cyanoacrylate
Appearance	Black
Viscosity @ 25°C	2000-4000 mPa.s (cP)
Density	1.1

Typical Curing Properties

Maximum gap fill	0.5 mm ***0.02 in***
Handling time	25-30 seconds (Steel) 30-35 seconds (Aluminium) 10-15 seconds (Buna N Rubber) 5-10 seconds (Phenolic)
Full strength	24 hours

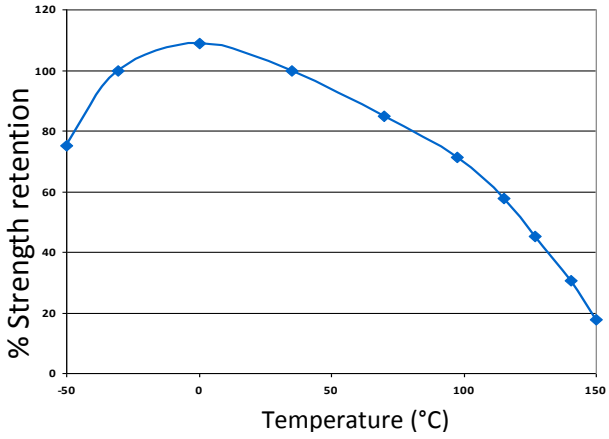
**Handling times can be affected by temperature, humidity and specific surfaces being bonded. Larger gaps or acidic surfaces will also reduce cure speed but this can be overcome by the use of Permabond C Surface Activator (CSA) or Permabond QFS 16.*

Typical Performance of Cured Adhesive

Shear strength* ASTM D-1002	Steel 19-23 N/mm² ***(2800-3300psi)*** Aluminium 13-15 N/mm² ***(1900-2200 psi)*** ABS >6 N/mm² ***(900psi)*** SF PVC >6 N/mm² ***(900psi)*** SF PC >5 N/mm² ***(700 psi)*** SF
Peel Strength (ASTM D-903)	40-60 N/25mm ***(9-13 PIW)***
Tensile Strength	25 N/2mm² ***(3600 psi)***
Glass Transition	58°C ***(140°F)***
Coefficient of thermal expansion	90 x 10^{-6} mm/mm/°C
Dielectric strength	10 mV/mm
Coefficient of thermal conductivity	0.2 W/(m.K)
Impact Strength (ASTM D-950)	16 kJ/m² ***(8 ft-lb/in²)***
Hardness	85 Shore A

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

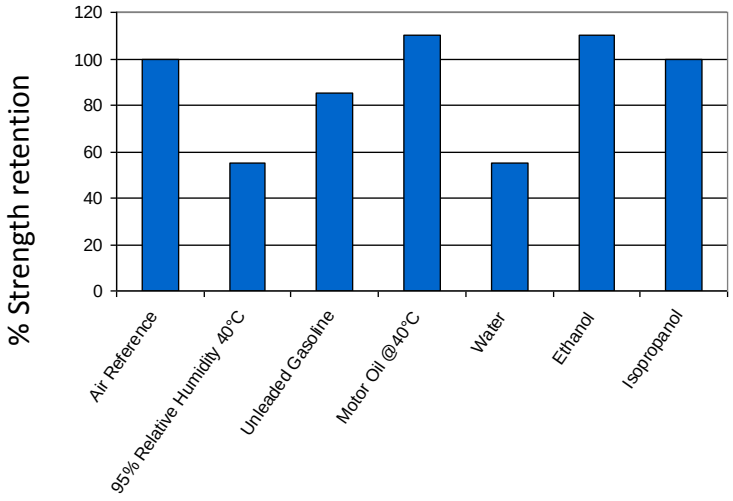
Temperature Resistance



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

737 can withstand higher temperatures for brief periods (such as for paint baking and wave soldering processes) providing the joint is not unduly stressed. The minimum temperature the cured adhesive can be exposed to is -55°C (-65°F) depending on the materials being bonded.

Chemical Resistance



Specimens were immersed for 1000 hours at 22°C (unless otherwise stated)

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 Material Safety Data Sheet.

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) Shake before use.
2) Apply the adhesive sparingly to one surface (usually 1 drop is sufficient).
3) Bring the components together quickly and correctly aligned.
4) Apply sufficient pressure to ensure the adhesive spreads into a thin film.
5) Do not disturb or re-align until curing is achieved, normally in a few seconds.
6) Any surplus adhesive can be removed with a suitable solvent.

NB:

For difficult or porous surfaces using a Permabond activator is recommended.

If bonding polypropylene, polyethylene, PTFE or silicone, prime first with Permabond Polyolefin Primer.

Storage & Handling

Storage Temperature	2 to 7°C ***(35 to 45°F)***
Shelf Life Stored in original unopened containers	6 months

Allow adhesive to reach room temperature before opening bottle to prevent condensation inside the bottle which can reduce shelf life.

Contact Permabond:

Europe: Tel. +44 (0)1962 711661
UK Helpline: 0800 975 9800
Deutschland: 0800 10 13 177
France: 0805 11 13 88
info.europe@permabond.com

US: Tel. +1 732-868-1372
Helpline: 800-640-7599
info.americas@permabond.com

Asia: Tel. +86 21 5773 4913
info.asia@permabond.com

www.permabond.com