

4C10 Cyanoacrylate

Permabond cyanoacrylates are single component adhesives which polymerise rapidly when pressed into a thin film between components. Strong bonds are developed extremely quickly, making Permabond 4C10 an ideal choice for high-speed production lines for increased productivity. Permabond 4C10 is suitable for a wide range of applications on most of the plastic, rubber and metal materials used in the medical device industry. The cured material passes USP Class VI and Cytotoxicity requirements.

4C10 is ideal for use on high-speed production lines

- Low Viscosity
- USP Class VI and meets cytotoxicity requirements
- Withstands ethylene oxide sterilisation and gamma irradiation

PHYSICAL PROPERTIES

Appearance	Colourless, Transparent
Viscosity @ 25°C	40 mPa.s
Specific Gravity @ 25°C	1.05
Flashpoint	82°C
Base Compound	Ethyl Cyanoacrylate

CURED PROPERTIES

Appearance	Colourless, Transparent
Softening Point	150-170°C
Shore D Hardness	85
Dielectric Strength	10,000 volts/mm
Service Temperature	-62 to +80°C
Water Absorption	<2%
Elongation	<5%

TYPICAL PERFORMANCE

Fixture Time (Steel)	5-15 seconds
(Nitrile Rubber)	5-15 seconds
(Phenolic)	5-10 seconds
Lap Shear Strength (Steel)	12 MPa
(Aluminium)	7 MPa
(Styrene)	1 MPa (substrate failure)
(PVC)	3.6 MPa (substrate failure)
Impact Strength	4-9.5 J

Handling times can be affected by temperature, humidity and specific surfaces being bonded. Larger gaps or acidic surfaces will also reduce cure speed.

Surface Preparation

The surfaces should be clean and dry. Apply a small drop of the adhesive to one of the surfaces, join together and hold or clamp for 15-60 seconds. Do not disturb or realign the joint until the adhesive has reached handling strength. Temperature, humidity and specific surfaces being bonded can affect actual handling times.

Hard to bond surfaces such as polypropylene, polyethylene, PTFE and silicone should be surface treated before bonding, for further advice please contact the Permabond technical team.

Storage & Handling

Permabond 4C10 has a shelf life of one year when stored in a refrigerator. Refrigerated product should be allowed to warm to room temperature before opening to prevent condensation causing premature hardening of the adhesive.

Cyanoacrylates will bond skin and eyes in seconds, Contact with skin and eyes should be avoided. Use in well ventilated area. Full information may be obtained from the Material Safety Data Sheet (MSDS).

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