

# Cyanoacrylates

Ihr Lieferant:

T-E-Klebertechnik

Anwendungs-, Verfahrens- und Dosiertechnik

Großer Kolonnenweg 3  
Tel.: 0511 - 353982 - 0  
internet: www.t-e-klebertechnik.de

30163 Hannover  
Fax.: 0511 353982 - 40  
mail: infotek@t-e-klebertechnik.de



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 and metals.

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

## Typical applications include:

- Electronics wire tacking
- Bonding blue-tooth headsets
- Hose clips onto automotive tubes
- Bonding automotive interior trim
- Tacking parts during assembly process (temporarily)
- Joining silicone O-rings
- Disposable medical device bonding
- Bonding mobile phone casing, antennae and keypads
- Sealing batteries
- Glazing applications
- Sealing transformer laminates

## Permabond low and medium viscosity cyanoacrylate formulations provide:

- Superior bonding to plastic, wood and rubber.
- 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.
- Fast 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 preparation and 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.
- Solvent free; non flammable.
- Superior bond strength; often exceeds that of substrate material.
- Low odour non-blooming products available
- High-temperature resistance (up to 250°C).

Handy Tip: 'Less is more' - cyanoacrylates are very efficient so only small drops are required to obtain a high-strength bond.



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

# Cyanoacrylate Product Chart

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40 Jahre Klebstofferrfahrung



| Grade  | Features                                      | Viscosity (mPa.s)                             | Maximum Gap Fill (mm)  | Shear Strength Steel (MPa) | Handling Times (seconds) |          |       | Service Temperature (°C) | Approvals |
|--------|---|---|--|----------------------------|--------------------------|----------|-------|--------------------------|-----------|
|        |   |   |  |                            | Rubber                   | Phenolic | Metal |                          |           |
| 101    | Low viscosity, penetrating grade              | 2-3   | 0.05   | 19-23                      | 2-5                      | 5-10     | 3-5   | -55 to +80               |           |
| 102    | General purpose                               | 70-90   | 0.15   | 19-23                      | 5-10                     | 10-15    | 10-15 | -55 to +80               | WRAS      |
| 105    | Difficult rubbers (e.g. EPDM)                 | 30-50   | 0.1  | 18-22                      | 5-10                     | 5-10     | 10-15 | -55 to +80               | WRAS      |
| 240    | High viscosity, slow cure                     | 1200-2500                                     | 0.4  | 21-25                      | 15-20                    | 15-20    | 15-20 | -55 to +80               | WRAS      |
| 731    | Highly flexible, toughened                    | 100-200                                       | 0.15   | 24-30                      | 15-20                    | 15-20    | <30   | -55 to +120              |           |
| 735    | Highly flexible, toughened, black             | 100-200                                       | 0.15   | 24-30                      | 10-15                    | 5-10     | 30-50 | -55 to +120              |           |
| 737    | Toughened - impact and peel resistant, black. | 2000-4000                                     | 0.5  | 19-23                      | 10-15                    | 5-10     | 15-20 | -55 to +120              |           |
| 791    | Ultra fast cure, low viscosity                | 30-50   | 0.1  | 18-22                      | 2-3                      | 2-3      | 2-3   | -55 to +80               |           |
| 792    | Ultra fast cure, general purpose              | 60-125  | 0.15   | 18-22                      | 2-3                      | 2-3      | 2-3   | -55 to +120              |           |
| 801    | High temperature resistance                   | 10-15   | 0.05   | 19-23                      | 10-15                    | 10-15    | 10-15 | -55 to +130              |           |
| 802    | High temperature resistance                   | 90-110  | 0.15   | 19-23                      | 10-15                    | 10-15    | 10-15 | -55 to +160              |           |
| 820    | High temperature resistance                   | 90-110  | 0.15   | 19-23                      | 10-15                    | 10-15    | 10-15 | -55 to +200              |           |
| 910    | Metal bonding                                 | 70-90   | 0.15   | 23-29                      | 10-15                    | 10-15    | 10-15 | -55 to +90               |           |
| 920    | High temperature resistance                   | 70-90   | 0.15   | 19-23                      | 10-15                    | 10-15    | 15-20 | -55 to +250*             |           |
| 940    | Low odour, low bloom                          | 3-10  | 0.05   | 16-20                      | 2-5                      | 10-15    | 10-15 | -55 to +80               |           |
| 941    | Low odour, low bloom                          | 10-20   | 0.08   | 16-20                      | 2-5                      | 10-15    | 10-15 | -55 to +80               |           |
| 943    | Low odour, low bloom                          | 90-110  | 0.15   | 16-20                      | <5                       | 5-10     | 10-15 | -55 to +80               |           |
| 947    | Low odour, low bloom                          | 900-1500                                      | 0.25   | 16-20                      | 2-5                      | 20-30    | 10-15 | -55 to +80               |           |
| 2010   | Very fast cure, thixotropic                   | 20rpm: 2000-2500<br>2rpm: 10,000-20,000       | 0.5  | 19-23                      | 10-15                    | 10-15    | 10-15 | -55 to +80               | WRAS      |
| 2011   | Non-drip, non sag gel                         | Gel   | 0.5  | 20-24                      | 5-10                     | 5-10     | 5-10  | -55 to +120              |           |
| 2012   | Low-odour gel                                 | 20 rpm: 10,000-25,000<br>2rpm: 50,000-150,000 | 0.5  | 16-20                      | < 30                     | < 30     | < 30  | -55 to +80               |           |
| 2013   | High temperature gel                          | 20 rpm: 8,000-13,000<br>2rpm: 35,000-50,000   | 0.5  | 21-22                      | < 30                     | < 30     | < 30  | -55 to +160              |           |
| 2050   | High viscosity, flexible                      | 1200-1800                                     | 0.2  | 16-20                      | 5-10                     | 5-10     | 10-15 | -55 to +80               |           |
| 4C10   | Medical device bonding                        | 30-50   | 0.1  | 13-15                      | 5-15                     | 5-10     | 5-15  | -55 to +80               | ISO10993  |
| 4C20   | Medical device bonding                        | 400-600                                       | 0.12   | 13-15                      | 10-25                    | 10-25    | 10-30 | -55 to +80               | ISO10993  |
| 4C30   | Medical device bonding                        | 1500  | 0.12   | 13-15                      | 5-10                     | 5-10     | 5-20  | -55 to +80               | ISO10993  |
| 4C40   | Medical device bonding                        | 2000  | 0.15   | 13-15                      | 5-10                     | 5-10     | 5-20  | -55 to +80               | ISO10993  |
| POP    | Polyolefin surface primer                     | 0.6   | For priming PE, PP, Silicone, PTFE before bonding with CA  |                            |                          |          |       |                          |           |
| CPP621 | Fingerprinting grade                          | 1-3   | N/A  |                            |                          |          |       |                          |           |
| CSA    | Surface activator                             | 0.55  | When using the cyanoacrylate adhesives to bond to acidic or porous surfaces, the use of Permabond CSA prior to bonding may be beneficial. Post assembly application of CSA-NF may also assist in the curing of adhesive fillets outside the bond area or in preventing the 'blooming' phenomenon sometimes associated with the use of this type of adhesive. |                            |                          |          |       |                          |           |
| CSA-NF | Non-blooming surface activator                | 1   |  |                            |                          |          |       |                          |           |

\*Post cure required at high temperature

