Cyberbond®

2008 Instant Adhesive

TECHNICAL DATA SHEET

Cyberbond 2008 is a single-component low-viscosity cyanoacrylate adhesive. It is extremely fast setting and specifically formulated for all types of rubber bonding. Cyberbond 2008 is also appropriate for use in medical device assemblies, as it is certified to ISO biocompatibility standards 10993-5, 10993-10 and 10993-11.

Monomer Cyanoacrylate (Fluid)	
Monomer Base	Ethyl ester
Appearance	Colourless
Viscosity @ 20°C	10-20 mPa·s
Density @ 20°C	1.06 g/cm^3
Flash Point	>85°C
Shelf Life @ 20°C	12 months (unopened)
RoHS Compliant	Yes

Polymer Cyanoacrylate (Solid)	
Tensile strength (NBR)	# 86-100 N/cm^2
Shear Strength (Steel)	10-20 N/mm^2
Temperature Range	-55°C / +95°C

Setting Time in Seconds	
Metal (Steel)	10-30
Rubber (EPDM)	1-3
Plastic (ABS)	2-4
Wood (Beech)	>60

= Material Failure n.r. = not recommended

Criteria for Optimal Bonding

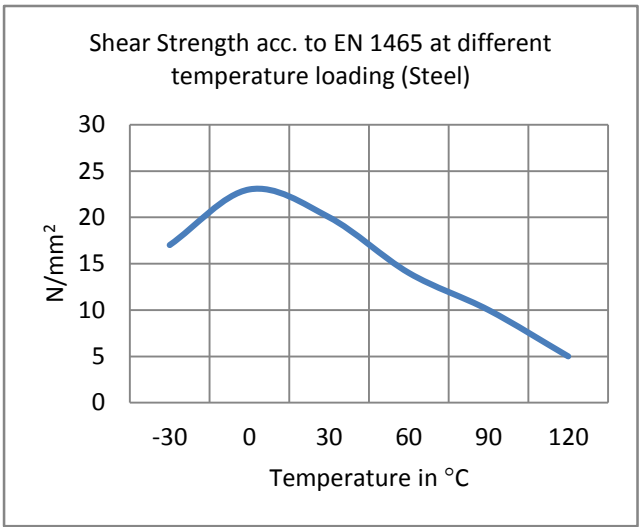
Humidity

Cyberbond cyanoacrylate adhesives polymerize by the catalytic activity between the humidity in the air and the humidity of the substrates being bonded. The higher the relative humidity is (e.g. in the room) the faster the products cure. The best atmospheric conditions for good, reliable bonds are between 40 to 70% relative humidity. If the humidity is to low (<30%) setting time can become very slow; if humidity is too high (>80%) a so-called shock polymerization can take place. The later provokes a certain shrinking process of the adhesive layer, which leads to less bond strength.

Temperature

Temperature influences the time of the chemical reaction significantly. Generally it can be said that a 10°C hike in temperature results in twice as fast polymerization time. The optimal room temperature for curing of this adhesive is between 20 and 24°C.

Heat Resistance



Chemical Resistance

Solvent	Example	Resistance
Alcohol	Ethanol, Methanol	+ + +
Ester (aromatic)	Ethyl acetate	- - -
Ketone (aromatic)	Acetone, Benzophenon	- - -
Aliphatic hydrocarbon (alkanes)	Petrol, Heptanes, Hexane	+ + -
Aromatic hydrocarbons	Benzyl, Toluol, Xylol	+ + -
Halogenated hydrocarbon	Methylenechloride, Chloroform, Chlorbenzol	- - -
Aqueous acid - weak - concentrated	Nitre, Muriatic acid, Sulphuric acid, Phosphoric acid	 + + + - - -
Aqueous alkaline - weak - concentrated	Sodium hydroxide solution, caustic potash	 + + + - - -

+ + + good + + - satisfactory + - - bad - - - impossible

Specifications and Approvals

ISO 9001:2008, ISO/TS 16949:2009
ISO 10993-5, ISO 10993-10, ISO 10993-11
Mil-A-46050C, Type II Class I, A-A-3097, Type II Class I

Surface Conditions

The surface condition of the mating parts has an enormous influence on the success of a bond. The roughness of the parts is not so important when using Cyberbond cyanoacrylate adhesives, due to the fact that cyanoacrylate adhesives reach very good strength properties, even on very smooth surfaces. More important than roughness, is that the surfaces to be bonded are clean. To achieve clean surfaces the following methods are most common:

- sand blast procedure
- chemical pre-treatment
- abrasive methods
- steam (degrease by steam)
- washing
- cleaning (e.g. Cyberbond 9999 Cleaner)

It is impossible to say which method is most effective. This has to be decided from case to case taking each application into account.

General Instructions

Dispense a drop or drops to one surface only. Apply only enough to leave a thin film layer after compression. Press parts together and hold firmly for a few seconds. Good contact is essential. An adequate bond develops in less than one minute and maximum strength is attained in 24 hours. Wipe of excess adhesive from the top of the container and recap.

Related Products

In order to achieve optimal polymerization results Cyberbond offers a range of related products such as:

- **Cyberbond 9090 Accelerator** which accelerates the polymerization of Cyberbond cyanoacrylate adhesives.
- **Cyberbond 9056 Primer** enables the bonding of unpolar materials such as Polyethylene (PE), Polyoxymethylene (POM) as well as modern Thermoplastic Elastomers (TPE) with Cyberbond cyanoacrylate adhesives.
- **Cyberbond 9060** dissolves and removes Cyberbond cyanoacrylate adhesives.
- **Cyberbond Conditioner Pen** accelerates, primes and cleans surfaces in one application and is applied via the easy to use felt pen applicator.

Storage

Unopened bottles should be stored in a cool place such as a refrigerator; do not freeze the adhesive. Once the bottle has been opened, always put the lid back on after use and keep at room temperature (approx 20°C). It is not advisable to put the adhesive back into the fridge as condensation formation may damage the adhesive.

Precautions

Experience over many years has shown there to be no health impairments expected when using Cyanoacrylate Adhesives. Due to the typical odour of the adhesive it is advisable to have good ventilation in the working area. For non-optimal working areas we recommend that adequate local exhaust ventilation be installed.

Additional safe handling information is listed in the Safety Data Sheet (SDS)

Note

The data contained herein is offered in good faith based upon information that is believed to be accurate and reliable, but no warranty, express or implied; regarding the accuracy of such information is made. The conditions or methods of handling, storage, use and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product. It is the responsibility of the user to determine the products suitability for their intended purpose.

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