H.B. Fuller | Cyberbond CB

CB 1008 Technical Datasheet

Metal Series
- fast bonding
- low viscosity

Cyanoacrylates are not really made to bond metal to metal. But when it comes to combinations with rubber or plastic, these products can be very suitable. Due to its low viscosity CB 1008 has got wicking properties.

Physical properties - monomer (uncured)

Base compound	Ethyl-2-cyanoacrylate
Appearance	colourless, transparent
Density at 20 °C in g/cm3	1,09
Flashpoint in °C	80
shelf life,20 °C,onopend, in months	12

Viscosity

cone-plate, @20 °C	
@ 160 rpm	9-15 mPas

Physical properties - Polymer

Appearance	transparent
Service temp range	-55 - 95 °C

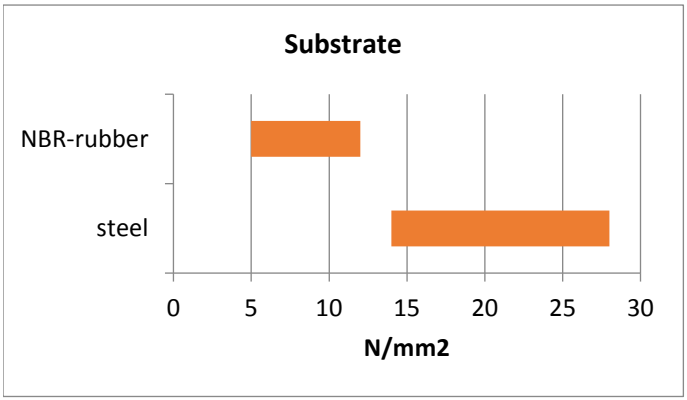
Setting time [seconds]

metal (steel)	20 - 50
EPDM	3 - 6
plastic (ABS)	4 - 6

strength of cured adhesive

Substrate	N/mm2		
NBR-rubber ▲	5	to	12
steel	14	to	28

▲ material failure



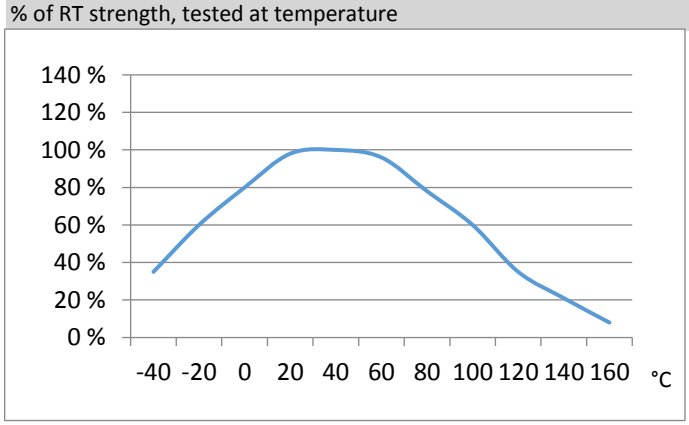
Specification

RoHS conform.

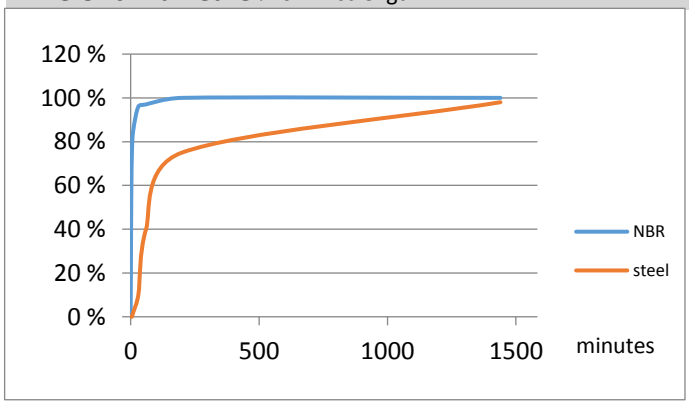
For details and certificates see www.Cyberbond.eu

Hot Strength on steel

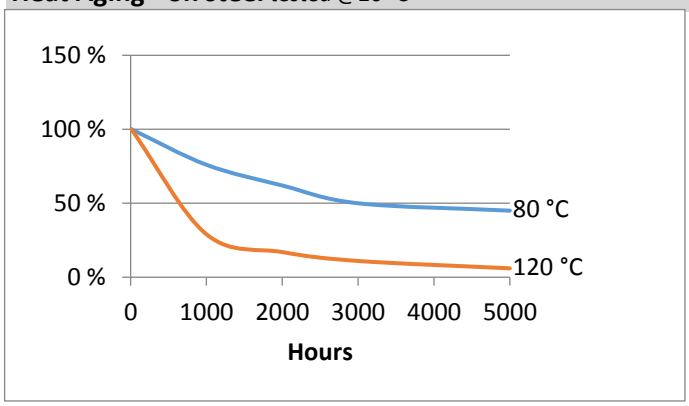
% of RT strength, tested at temperature



Time Until Full Cure % of RT strength



Heat Aging - on steel tested @20 °C



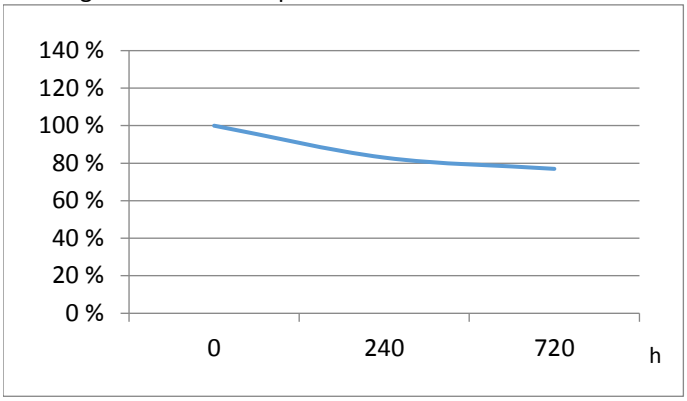
Durability after Storage under Changing Climatic

Conditions ; test with stainless steel

above freeze point 80%rel. humidity

temperature range: -20 - 80 °C

	[h]
Cycle count	60
Holding time at start temperature	0
Heating up phase	3
Keeping warm phase	3
Cooling down phase	3
Holding time at final temperature	3



Solvent resistance

Solvent	Example	Resistance
alcohol	ethanol, methanol	+++
ester (aliphatic)	ethyl acetate (acetic acid ethyl ester)	---
ketones	acetone, benzophenone	---
aliphatic hydrocarbons (alkanes)	petrol, heptane, hexane	++
aromatic hydrocarbons	benzene, toluene, xylene	++
halogenated hydrocarbons	methylene chloride, chloroform, chlorobenzene	---
weak acqueous acids	diluted nitric- , muriatic-, sulfuric- , phosphoric acid	+++
concentrated acid	nitric acid, muriatic acid, sulfuric acid, phosphoric acid	---
weak acqueous bases	diluted sodium hydroxide -, caustic potash solution	+++
concentrated bases	sodium hydroxide -, caustic potash solution	---
water		++
iso-propanol		+++
acetone		---
mineral oil		++

+++ very good ++ good --- very bad

General Information CA

Cyanoacrylates are fast setting, one component and solvent free adhesives. They are based on esters of cyanoacetic acid. To get to a finished product, mainly thickeners, respectively film forming agents (polymer methacrylics and acrylics) and stabilisers are added. The polymerization is initiated by present humidity. Best results are given between 40 to 70 % relative humidity.

Cyberbond standard grades are as follows:

- Powerdrop series (stabilised ethyl ester)
- Elastomer and plastic series (ethyl ester)
- Neomer Series (surface insensitive ethyl ester)
- xtraflex series (rubber toughened ethyl ester)
- metal series (ethyl ester)
- low odour series (alkoxy ester)
- medical series (butyl- and octyl ester)

Measurement of Viscosities

Viscosity describes the flow-ability of a liquid. Cyberbond measures the viscosity of the products by means of the cone/plate method: the liquid is applied on a panel and a defined cone presses the liquid together and rotates.

You differentiate between a Newtonian and a thixotropic liquid. In terms of a Newtonian liquid you will get a relative constant viscosity graph in dependence of the rotary speed of the cone. In terms of thixotropic liquids the product becomes more liquid (down to its base viscosity) the faster the cone rotates.

The viscosity is measured in mPa*s (milli Pascal x second) [SI system] or in cP (centipoise) [CGS- system]; 1 mPa*s = 1 cP.

In order to allow products comparison all adhesives are measured at the same rotation speeds.

- Newtonian liquids at 160 upm
- Thixotropic liquids at 0,5 upm and at 160 upm

Temperature always is at 20 °C / 68 °F, if not mentioned to be different.

Clean Surface

The surface condition of the mating parts has an enormous influence on the success of a bond. To achieve good bonding success the mating parts should be clean.

Additional Programme

In order to support certain applications Cyberbond offers perfectly balanced additional products such as:

- Primer and Conditioner Pen: in order to change surface tension; enables to bond unpolare materials (Standard: CB 9056)
- D-Bonder: in order to dissolve adhesives (Standard: CB 9060, CB 9065, CB 9066)
- Activator: in order to accelerate the curing of adhesives (Standard: CB 9090, CB 9096, Quickstep 9040, Quickstep 9080)
- Cleaner: in order to clean surfaces professionally (Standard: CB 9999)

LINOP Equipment

Cyberbond offers by means of the LINOP Equipment range suitable dosing and LED based curing devices. We also refer to suitable dosing tips which help an economical use of the adhesives (also if used manually).

Storage

Store products in a cold and dark place. Before use allow to reach ambident temperature.

Potential Danger of Cyanoacrylates

You should care for the following:
- use in well ventilated areas only
- install suitable exhaust systems in the workshop
- apply material economically and use a dosing system where appropriate
- allow a consistent relative humidity of 50 to 65 %; with regards to lower figures the polymerization will be delayed and monomer adhesive fume will appear
- if necessary: wear suitable, non-sucking gloves (e.g. no cotton)
- keep adhesive out of reach of children

The data mentioned in this TDS, particularly the recommendations and use of products are based on our recent knowledge and experience. Due to the fact of having so many different materials involved and conditions of applications which are out of our influence, we strongly recommend to do sufficient tests in order to guarantee that Cyberbond products are suitable for the intended process and applications. Except for wilful acts any liability based on such recommendations or any verbal advice is hereby expressly excluded.

For safe handling consult Material Saftey Data Sheet (MSDS).

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