

Description

CT 7281 is a one-part cyanoacrylate instant adhesive designed for bonding hard-to-bond substrates which require uniform stress distribution and high bonding strength. It is also good for bonding porous materials such as wood, leather and fabric.

Features

- Recommended substrates: metal, plastic, elastomer, wood, leather, fabric
- Good bonding strength to hard-to-bond substrates
- Fast fixture

Uncured Properties

Chemical Type	Ethyl Cyanoacrylate
Appearance	Transparent
Viscosity @ 25°C [mPa.s]	100
Specific Gravity [g/cm³]	~1.06
Shelf Life @ 2-8°C [months]	6

Curing Conditions

Fixture Time @ 25°C, 50%RH [secs]	
Rubber	<5
ABS	<5
Polycarbonate	5-10
Steel	8-15
Stainless Steel	8-15
Aluminum	8-15
Wood	<5

Full Strength @ 25°C [hrs]	24
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Cured Properties

Tensile Strength [MPa]	
ASTM D638	
ABS	6*
Polycarbonate	8*
Steel	16
Aluminum	15
Stainless Steel	16

*Material failure

Cure speed vs. bond line thickness

The cure speed depends on the bond line thickness. Thin bond lines result in high cure speed. Increasing bond line thickness will decrease the cure speed.

Cure speed vs. humidity

The cure speed depends on the ambient relative humidity. The best adhesion results are achieved when the relative humidity in the working environment is 40% to 75% at 25°C. Lower humidity leads to slower cure speed. Higher humidity accelerates it, but may impair the final bonding strength.

Cure speed vs. activators

Applying activators to the adhesion surface will increase cure speed. However, it may affect the final bonding strength. Therefore, thorough tests are recommended to confirm the impacts.

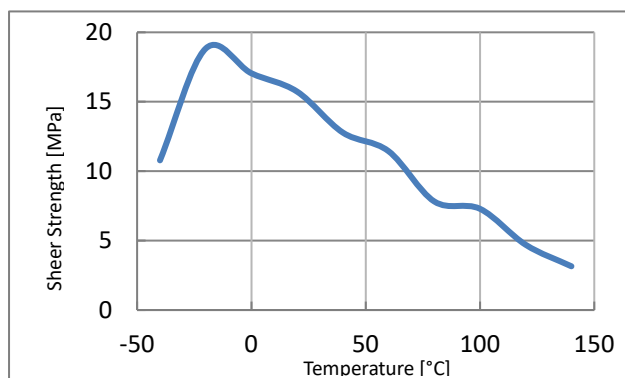
Cure speed vs. substrates

The cure speed depends on the substrates. The table **Curing Conditions/Fixture Time** shows the fixture time achieved on various substrates. Fixture time is defined as the time to develop lap shear strength of 0.1MPa.

Temperature vs. bonding strength

After curing for 24 hrs at 25°C/60%RH, then leaving for 30 mins at the specified temperature.

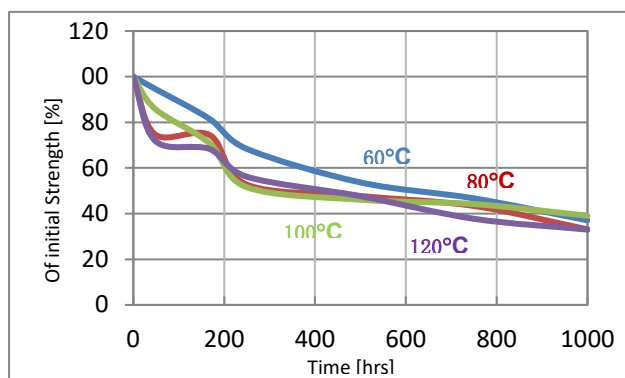
Test substrate: steel / steel



Heat resistance

The bonding strength is measured at 120 minutes after aging bonded substrates for a specified time period at special temperature.

Test substrate: steel / steel



Chemical/solvent resistance

Lab shear strength of bonded steel substrates immersed in various solvents for special times and tested @ 25 °C.

Solvent	% of Initial Strength		
	100	500	1000
Isopropanol	95	91	86
Unleaded gasoline22	95	61	58
Water	80	64	63
Water/glycol	65	48	29
Ethanol	85	78	78
4098%RH	95	88	54

Directions for Use

1. Surface Treatment

Surfaces to be bonded should be free of dust, oil, grease or any other contaminants in order to achieve a reproducible bond. For slightly contaminated surfaces, it is sufficient to wipe with isopropanol or ethanol. Substrates with a low surface energy (e.g. polyethylene, polypropylene) need to be pre-treated physically (e.g. atmospheric plasma or corona) in order to achieve sufficient adhesion.

Use primer CT 9202 for bonding to hard-to-bond materials such as rubber, PP, PE, etc.

2. Application

Products are supplied ready for use. Depending on package type, they can be dosed manually, semi-automatically or fully-automatically with a dosage apparatus. With automatic dispensing using a cartridge, the adhesive is conveyed via pressure and a piston rod

to a dispense valve. With bottles, the adhesive is conveyed using a pump.

After application, it is recommended that the two substrates be adjoined immediately as it is possible the curing process will begin with select products under ambient conditions.

This product is soluble in acetone, dimethyl formamide, nitromethane and dimethyl sulfoxide.

Disclaimer

The information provided here including the recommendations for use and application of the product is based on internal laboratory test conditions and should only be used as a reference. CollTech does not assume responsibility for the test or performance results obtained by the user. It is the responsibility of the user to perform their own evaluations to confirm whether this product is suitable for their application.

Storage

Maximum shelf life may be obtained when product is stored in a cool, dry location at a temperature between **2°C to 8°C**. TO PREVENT CONTAMINATION OF UNUSED PRODUCT, DO NOT RETURN ANY PRODUCT TO ITS ORIGINAL CONTAINER.

Materials Handling

Refer to the Material Safety Data Sheet (MSDS) for this product.