



TECHNICAL DATA

CS1500 CYANOACRYLATE ADHESIVE



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Product Description

Chemence CS 1500 is a medium-high viscosity Ethyl Cyanoacrylate adhesive. CS 1500 is suitable for bonding a very wide range of materials, including some porous ones, where very fast cure speed is required.

Typical Applications

CS 1500 is specially formulated to give superior bonds on common substrates. CS Grades work on acidic and porous substrates where other cyanoacrylates fail to bond. Will bond wood, cork, leather, cardboard and similar surfaces. CS 1500 relies less on surface moisture for cure speed than standard cyanoacrylates. CS 1500 has enhanced gap filling capacity.

Properties of Material

	UNIT	VALUE
Chemical type		Ethyl
Appearance		Clear liquid
Specific gravity		1.10
Viscosity ¹		1275-1650
(range)	cPs	
Typical value	cPs	1500
Tensile strength ²	N/mm ²	21
Fixture time	Secs	5-60
Full cure @ 20°C	Hours	24
Max gap fill	mm	0.20
Shelf life @ 5°C	Months	12
Temperature range	°C	-50 to +80

¹ Brookfield LVF, spindle 3, speed 30rpm

² ISO 6922



Typical Curing Performance

SUBSTRATE	CURE TIME (seconds)
Steel/steel	<60
ABS/ABS	<20
Rubber/Rubber	<15
Wood (Balsa)	<3

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Cure Speed Vs Substrate

The speed of cure of cyanoacrylates varies according to the substrates to be bonded. Acidic surfaces such as paper and leather will have longer cure times than most plastics and rubbers. Some plastics with very low surface energies, such as polyethylene, polypropylene and Teflon® require the use of Chemence LA 77 Primer (see LA 77 TDS for further info).

Cure Speed Vs Environmental Conditions

Cyanoacrylate adhesives require surface moisture on the substrates in order to initiate the curing mechanism. The speed of cure is reduced in low humidity conditions. Low temperatures will also reduce cure speed. All figures relating to cure speed are tested at 21°C.

Cure Speed Vs Bond Gap

Chemence cyanoacrylates give best results on close fitting parts. The product should be applied in a very thin line in order to ensure rapid polymerisation and a strong bond. Excessive bond gaps will result in slower cure speeds.

Cure Speed Vs Activator

Chemence Activators LA 11 and LA 12 may be used in conjunction with Chemence cyanoacrylates where cure speed needs to be accelerated. Cure speeds of less than 2 seconds can be obtained with most Chemence cyanoacrylates. The use of an activator can reduce the final bond strength by up to 30% - Chemence recommends testing on the parts to measure the effect.

Chemical/Solvent Resistance

Chemence cyanoacrylates exhibit excellent chemical resistance to most oils and solvents, including motor oil, leaded petrol, ethanol, propanol and Freon. Cyanoacrylates are not resistant to high levels of moisture or humidity over time.

Chemical/Solvent Resistance

HOT STRENGTH

Chemence cyanoacrylate adhesives are suitable for use at temperatures up to 80°C. At 80°C the bond will be approximately 70% of the strength at 21°C. The bond strength at 100°C is approximately 50% of full strength at 21°C.

HEAT AGING

Chemence cyanoacrylates retain over 90% of their strength when heated to 80°C for 90 days and then tested at 21°C. Heating the bond to 100°C and then testing at 21°C gives bond strength of approximately 50% of initial strength.

Removal of Cured Cyanoacrylate

Cured cyanoacrylates may be removed from most substrates, and parts disassembled, with Chemence LA 68 De-bonder. It is not possible to fully remove cyanoacrylate from fabrics.

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Storage

Store in a cool area out of direct sunlight. Refrigeration to 5°C gives optimum storage stability.

Presentation

Tubes 2g, 3g, 4.5g
Bottles 5g, 20g, 50g, 500g
Bulk 10kg, 20kg

Available in bulk for use with dispensing systems.

General Information

For safe handling of this product consult the Material Safety Data Sheet No. 01-005-438.

Directions for Use

Bond speed is very fast so ensure that parts are properly aligned before bonding.

Chemence Activators may be required if there are gaps or porous surfaces. Some plastics may require application of Chemence LA 77 Primer.

Ensure parts are clean, dry and free from oil and grease.

Product is normally hand applied from the bottle. Apply sparingly to one surface and press parts firmly together until handling strength is achieved. As a general rule, as little cyanoacrylate as possible should be used – over application will result in slow cure speed and lower bond strength.

Please contact your Chemence representative for further advice on dispensing solutions.

Data Ranges

The data contained in this data sheet may be reported as typical value and/or range. Values are based on actual test data and are verified on a regular basis.

Disclaimer

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