

PRODUCT DESCRIPTION

CH-10 a single-components, cold setting cyanoacrylic adhesive, which does not comprise solvents. The glue cures under the influence of humidity contained in the air.

TYPICAL APPLICATIONS

High viscosity adhesive. Recommended for bond metals, plastics, rubbersands, elastomers. High resistance to high temperature, vibration, atmospheric moisture.

PRODUCTS PROPERTIES

Main components	ethyl cyanoakrylate
Consistency	liquid
Desity [g/cm ³] w 25 °C	1.10
Colour	dark
Flash point [°C]	> 80
Viscosity [mPa s] AT 25 °C spindle 2 (acc.to DIN 54453)	2700-3900

COUSES OF GLUESSETTING

Setting velocity vs. joint gap width

Setting velocity depends on the gap width. Decrease of the distance between cemented surfaces makes setting faster, and the other way round. The further results relate to 0.05 mm gap.

Setting velocity vs. bonded material

Glue setting time depends on nature of the material being joined. The setting time shown in the table is defined for the time required to obtain the shear strength of 0.1 MPa. The test was performed at 22 °C ambient temperature, and 50% air relative humidity.

Bonded material	Setting time [s]
Steel	50-120
Aluminium	10-40
PVC	35-100
ABS	20-50
Nutril rubber	10-30
Polycarbonate	20-90

PHISICAL PROPERTIES OF CURED PRODUCT

Thermal expansion factor [1/K] ca. 9×10^{-5}
Thermal conductivity factor [W/(m K)] ac. 0.1

STRENGHT PARAMETRS

Value of stress shearing the joint (acc. to DIN 53283) [MPa]

Steel	18-22
Aluminium	10-20
PVC	10-20
ABS	5-10
Nitrile rubber	10-15
Polycarbonate	5-15

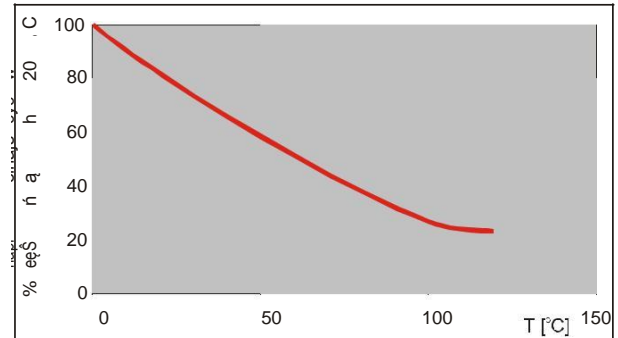
The above parameters have been determined after 24-hour curing at the temperature of 22 °C, using tiles from the given material, and of dimensions to the a/m standard.

TEMPERATURE RESISTANCE

tests were made after 168 h of curing at 22 °C.

Shear stress vs. temperature

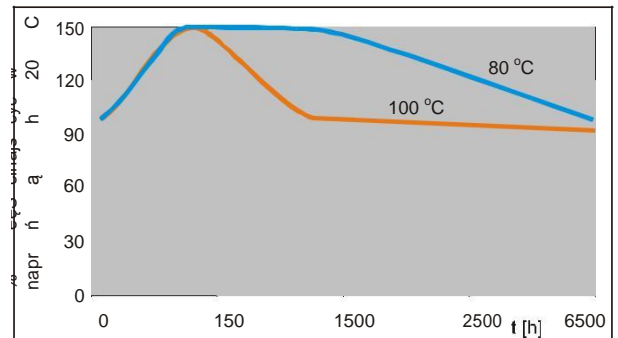
The graph shows the change of shear stress at stretching vs. temperature. The tests were made on ISO 4587, using steel tiles. The stresses were measured at the given temperature.



Axis of ordinates: % of shear stress in 20 °C.

Shear stress vs. Time in increased temperature (thermal ageing)

The graph shows the change of shear stress at stretching vs. Time for various temperatures. The tests were made basing ISO 4587, using steel tiles. The stresses were measured at 22 C temperature.



Axis of ordinates: % of shear stress in 20 °C.

CHEMICAL RESISTANCE

Tests were made after 168hours of curing at 22 °C. Stress measurements were taken at the temperature 22 °C.

	°C	% of initial strenght		
		100h	500h	1000h
Medium				
Petrol	20	85	80	80
Engine oil	40	90	85	85
Isopropanol	20	75	75	75
Ethanol	20	90	90	90
Freon	20	90	85	85
Air relative humidity 95%	40	100	100	100



05-092 Łomianki ul. Krzywa 20B Poland
tel./fax. +48 (22) 751 28 06/07 www.chester.com.pl

Technical Data Sheet

Chester
Molecular **CH-10**

Research and Development Department

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Page 2/2

ADDITIONAL INFORMATION

Storing

The glue must be kept in original containers, in dry and cool rooms. Recommended storing temperature ranges from +2 °C to +8 °C. Storing at temperatures higher or lower than those stated above may adversely influence the glue properties. Glue in its container be protected against any contamination.

Instruction for use

Elements to gluing must dry, clean, and degreased. Glue should be applied directly from the packaging (bottle) fitted with an applicator tip, only onto one of the joined surfaces, and the elements must be passed together immediately. In case of joining areas, use point glue application technique.