chester molecular ®
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PRODUCT DESCRIPTION

CH-06 is a single-component, ambient temperature cured cyanoacrylate adhesive, free from solvents. The curing of the adhesive is caused by the moisture in the air, which condenses on the glued parts It is GEL consistency.

APPLICATIONS

CH-54 glues metals, plastics, rubbers and elastomers Perfectly sticks together absorbent and porous surfaces, e.g. fabrics, cardboard, wood. Its thixotropic consistency facilitates application to vertical surfaces. Polymerizes at low air humidity. Intended for connections transmitting high static forces.

PROPERTIES

Chemical type	Ethyl cyanoacrylate
Form	gel
Density [g/cm^3] at 25°C	1,10
Colour	colourless
Flash point [°C]	> 80

CURING PEFORMANCE

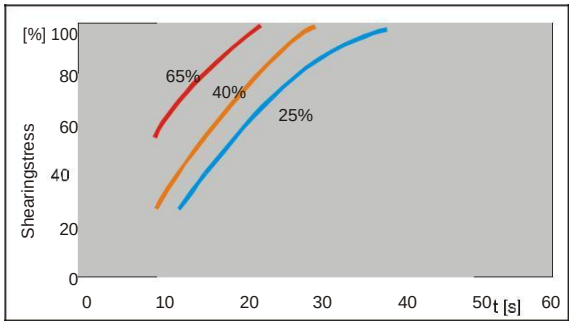
Cure speed vs. bond gap

The rate of cure depends on the gap size. Thin bond gap results in high cure speeds, increasing the bond gap decreases the rate of cure.

The following results refer to a 0,05mm gap.

Cure speed vs. humidity

The graph shows the increase in shear stress in time functions for different relative air humidity. The tests were carried out in accordance with DIN53283 using Buna N rubber..



Cure speed vs. substrate

The rate of cure depends on the substrate used. The table below shows the fixture time achieved on different materials at 22 °C / 50 % relative humidity. This is defined as the time to obtain a shear strength of 0,1 N/mm².

Bonded material	Setting time [s]
Steel	5-25
Aluminium	2-10
PVC	2-10
ABS	5-10
Nitrile rubber	5
Wood hard	60-150
Leather	5-20
Paper	1-5
Textiles	2-25
Polycarbonate	10-45

PHYSICAL PROPERTIES OF CURED PRODUCT

Thermal expansion factor [1/K]	ca. 8×10^{-5}
Thermal conductivity factor [W/(m K)]	ca. 0,1

STRENGTH PARAMETERS

Value of stress shearing the joint (acc. to DIN 53283)	[MPa]
Steel	15-25
Aluminium	10-20
PVC	5-20
ABS	5-20
Nitrile rubber	5-15
Polycarbonate	5-20

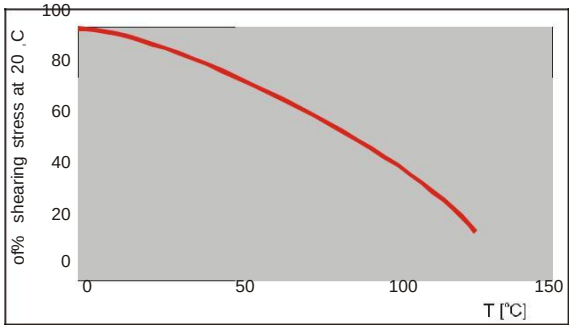
The above-mentioned parameters were determined after 24 h curing at the temperature of 22 °C tiles made of a given material with dimensions in accordance with the above-mentioned standard.

TEMPERATURE RESISTANCE

The tests were carried out after 168h curing at 22°C

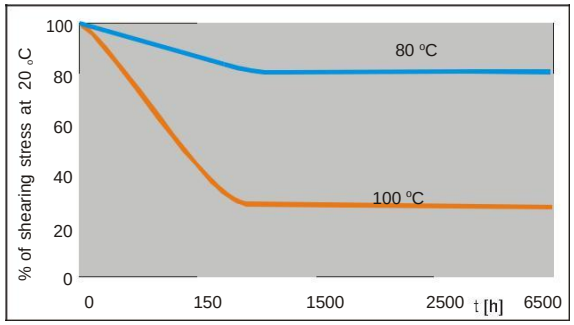
Shear stress vs. temperature

The graph shows the change of shear stress in tension as a function of temperature. Tested according to DIN 53283 standard with the use of steel plates at temperature.



Shear stress as a function of time at elevated temperatures (Heat Aging)

The graph shows the change of shear stress as a function of time at various temperatures.. The tests were carried out according to DIN 53283, using steel tiles. Parts are aged at temperature indicated and tested at 22°C



CHEMICAL RESISTANCE

The tests were carried out after 168h curing at 22°C.
Tested at 22°C.

		% of initial strength		
Medium	°C	100 h	500 h	1000 h
Petrol	20	100	100	100
Engine oil	40	90	85	75
Isopropanol	20	100	100	100
Ethanol	20	100	100	100
Freon	20	100	100	100
Air relative humidity: 95%	40	65	50	50

OTHER INFORMATION

Storage

Product should be stored in closed 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 must be protected against any contamination.

Instructions for use

Elements to be joined must be 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 pressed together immediately. In case of joining larger areas, use point glue application technique. If the glue setting time caused by acid surface (pH < 7), low air humidity, or large gap, is not satisfactory, use Chester Molecular CH-2 activator.

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