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# CH-06



## PRODUCT DESCRIPTION

**CH-06** is a single-component, cold setting cyanoacrylic adhesive, which does not comprise solvents. The glue cures under the influence of humidity contained in air.

## TYPICAL APPLICATIONS

CH-06 bonds metals, plastics, rubbers and elastomers. For cementing PE, PP, ABS, PTFE and other surfaces difficult to glue using of CH-2 primer is necessary.

## PRODUCT PROPERTIES

| | |
|---|---|
| Main component | cyanoethyl acrylate |
| Consistency | liquid |
| Density [g/cm$^3$] at 25°C | 1.10 |
| Colour | colourless |
| Flash point [°C] | > 80 |
| Viscosity [mPa s] at 25°CP: spindle 1 (acc. to DIN 54453) | 15-25 |

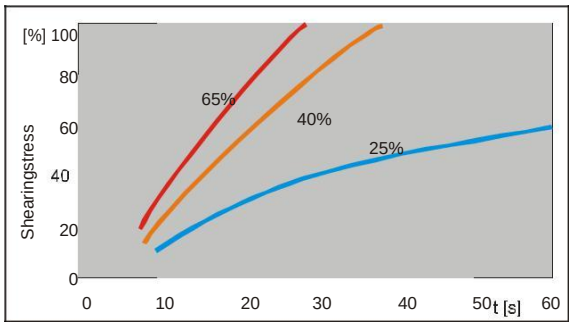
## COURSES OF GLUE SETTING

### 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 quoted results relate to 0.05 mm gap.

### Setting velocity vs. humidity

The graph shows the rise of shear stress vs. time at various air relative humidity values. Tests were performed according to DIN 53283 using Buna N rubber.




Axis of ordinates: shear stress

### Setting velocity vs. bonded material

Glue setting time depends on the 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 | 10-30 |
| Aluminium | 2-10 |
| PVC | 2-10 |
| ABS | 2-10 |
| Nitrile rubber | 5 |
| Polycarbonate | 10-45 |

## PHYSICAL PROPERTIES OF CURED PRODUCT

| | |
|---|---|
| Thermal expansion factor [1/K] | ca. $8 \times 10^{-5}$ |
| 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 | 5-8 |
| ABS | 5-8 |
| Nitrile rubber | 5-15 |
| Polycarbonate | 2-4 |

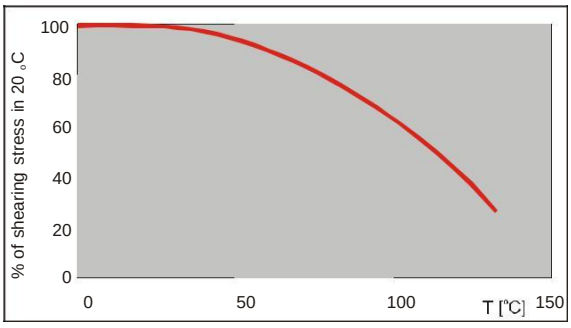
The above parameters have been determined after 24-hour curing at the temperature of 22°C, using tiles from the given material, and of dimensions conforming to the a/m standard.

## TEMPERATURE RESISTANCE

Tests were made after 168 hours of curing at 22°C.

### Shear stress vs. temperature

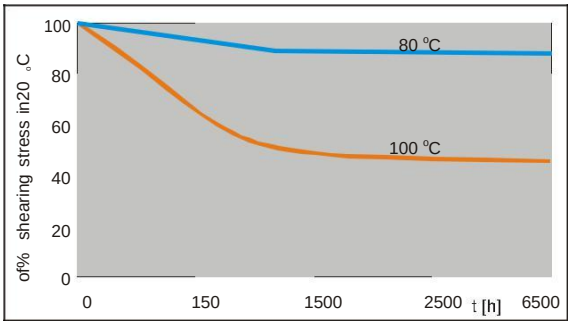
The graph shows the change of shear stress at stretching vs. temperature. The tests were made basing on DIN 53283, using steel tiles. The stresses were measured at the given temperature.




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 on DIN 53283, using steel tiles. The stresses were measured at the temperature of 22°C.



## CHEMICAL RESISTANCE

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

| | | % of initial strength | | |
|---|---|---|---|---|
| Medium | °C | 100 h | 500 h | 1000 h |
| Petrol | 20 | 100 | 100 | 100 |
| Engine oil | 40 | 100 | 95 | 95 |
| Isopropanol | 20 | 100 | 100 | 100 |
| Ethanol | 20 | 100 | 100 | 100 |
| Freon | 20 | 100 | 100 | 100 |
| Air relative humidity: 95% | 40 | 75 | 75 | 70 |

## 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 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-3 activator. For cementing polyoleofines and other surfaces difficult to glue, use of CH-2 primer is necessary.