

# Contact Cyanoacrylate Adhesives

## Contact GEL



Cyanoacrylate adhesive for special requirements | thixotropic (pasty) | very slow curing = position correction

WEICON Contact GEL is pasty (highly thixotropic 60000 - 90000 mPa•s) and cures very slowly. By using WEICON Activator Spray, the curing time can be reduced. The adhesive is suitable for porous surfaces and higher tolerance gaps and can be used on vertical surfaces. Repositioning is also possible after the parts have been joined. It is suitable for the bonding of various materials. WEICON Contact Gel can be used both in the hobby sector and in model building. It can also be used in many different industrial applications.

### Characteristics

Base	ethyl
Texture	pasty
Colour after curing	colourless
Silicone-free	yes

### Processing

Processing temperature	+15 °C to +40 °C
Relative air humidity	40% - 70%
Viscosity	60.000 - 90.000
Density (+20 °C)	1,1 g/cm <sup>3</sup>
Gap bridging up to max.	0,2 mm

### Curing

Initial adhesion in seconds (shear strength: 0,5 MPa)	
- measured at	23 °C and 50 % relative humidity
on aluminium sandblasted	20-30 sec.
on ABS untreated	20-40 sec.
on rigid PVC	30-50 sec.
Final strength (100 % strength)	24 h

### Mechanical properties after curing

Shear strength according to DIN EN 1465	
Steel sandblasted	11-21 MPa
Aluminium sandblasted	5-15 MPa
Rigid untreated PVC	8-13 MPa
Untreated ABS	6-12 MPa
PC (polycarbonate)	6-12 MPa

### Thermal parameters

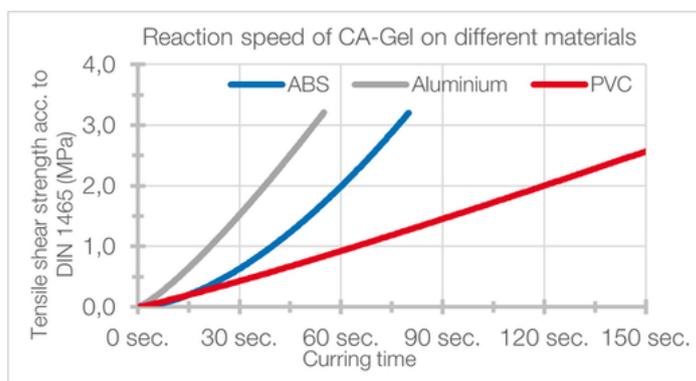
Temperature resistance	-50°C to +80°C, briefly up to +100°C
Softening temperature	+150 °C
Refraction index	~ 1,49 nD20
Thermal expansion coefficient	~ 80 x 10 <sup>-6</sup> m/(m·K)
Thermal conductivity	DIN EN ISO 22007-4 ~0,1 W/m·K

### Electrical parameters

Resistance	DIN IEC93 >10 <sup>15</sup> Ω·cm
Dielectric strength	~ 25 kV/mm

### Approvals / Guidelines

ISSA Code	75.629.07
IMPA Code	815251



### Instructions for use

When using WEICON products, the physical, safety-related, toxicological and ecological data and regulations in our EC safety data sheets ([www.weicon.com](http://www.weicon.com)) must be observed.

### Surface pre-treatment

The successful application of WEICON Contact Cyanoacrylate Adhesives depends on the thorough preparation of the surfaces. This is the most important factor for overall success. Dust, dirt and moisture or wetness have a negative impact on the adhesion.

Therefore, before processing WEICON Contact Cyanoacrylate Adhesives, the following points must be observed: For a flawless adhesive bond, adhesive surfaces must be clean and dry (clean and degrease with WEICON Surface Cleaner). Smooth surfaces should be roughened mechanically. To improve the adhesion of plastics that are difficult to bond (e.g. PE, PP, POM, PTFE), thermoplastic elastomers (TPE) and silicones, WEICON CA-Primer can be applied to the bonding surface.

### Note

The specifications and recommendations given in this technical data sheet must not be seen as guaranteed product characteristics. They are based on our laboratory tests and on practical experience. Since individual application conditions are beyond our knowledge, control and responsibility, this information is provided without any obligation. We do guarantee the continuously high quality of our products. However, own adequate laboratory and practical tests to find out if the product in question meets the requested properties are recommended. A claim cannot be derived from them. The user bears the only responsibility for non-appropriate or other than specified applications.

# Contact GEL

## Contact Primer for Polyolefines

Without pre-treatment, many plastics cannot or can only be bonded under certain conditions. When these plastics are pre-treated with WEICON Contact Primer, their surface structure changes. This makes it possible to bond plastics that are otherwise difficult to bond, e.g. polyethylene (PE) and polypropylene (PP) from the polyolefine group. Even modern thermoplastic elastomers (TPE), PTFE and related plastics as well as silicones can be bonded, when pre-treated with WEICON Contact Primer.

## Processing

The products are supplied ready for use. Depending on the form of delivery, they can be processed by hand directly from the container or with appropriate dosing equipment. Apply WEICON Contact Cyanoacrylate Adhesive to just one of the bonding surfaces. The layer thickness when applying the adhesive should be between min. 0.05 mm and max. 0.2 mm, as otherwise complete curing cannot be guaranteed. For large-surface bondings, WEICON Contact Cyanoacrylate Adhesives should be applied in dots in order to prevent inner tensions. WEICON Contact Cyanoacrylate Adhesives are very economical. One drop is sufficient for an adhesive area of 3 to 5 cm<sup>2</sup>.

## Curing

After applying the product, the parts to be bonded must be joined quickly and fixed if possible, since the curing of the products has already started as a result of the humidity in the ambient air or condensed on the bonding surfaces. The components should be bonded at a relative air humidity level between 40 % and 70 %. Below 40 %, the curing process is slowed down significantly or even prevented altogether. At an air humidity level above 70 % or with strongly alkaline substrates (e.g. glasses), there is a risk of shock curing. In these cases, certain materials show a drop in strength by 10 % to 15 % due to tensions in the adhesive layer. Alkaline surfaces (pH value >7) accelerate the curing process, acidic surfaces (pH value <7) slow down the curing process and can prevent polymerisation altogether in extreme cases. If curing is delayed or disturbed by factors such as a too wide adhesive gap, porous or acidic surface, the use of WEICON Contact Activator is recommended.

## WEICON Contact Activator

The activator speeds up the curing process of WEICON Contact Cyanoacrylate Adhesives. When applied to absorbing surfaces, e.g. wood or foam etc., and all chemically-treated surfaces, e.g. zinc galvanized metals etc., the activator's effectiveness lasts approx. one minute. On non-absorbent surfaces, the activator's effectiveness lasts up to approx. 12 hours. Use is recommendable with:

- highly viscous WEICON Contact types

# Contact Cyanoacrylate Adhesives

- large thickness of the adhesive layer
- absorbing and porous surfaces
- passive materials (alkaline surfaces, like for example zinc-coated metal parts)
- disadvantageous environmental conditions (low temperatures, low air humidity < 30 %).

## Storage

WEICON Contact Cyanoacrylate Adhesives have a shelf life of at least 9 months, when stored in unopened condition at room temperature (+18 °C to +25 °C) in a dry and dark space. Temperatures of approx. +5 °C will increase the shelf life to 12 months.

## Scope of delivery

Adhesive

## Accessories

10024317	Surface Cleaner, 150 ml, transparent
10024313	Surface Cleaner, 400 ml, transparent
10000282	CA-Activator Spray, 150 ml
10033805	CA-Activator Spray AC, 150 ml
10000275	CA Primer for Polyolefines, 10 ml
10000278	CA Primer for Polyolefines, 100 ml
10068262	Dosing Tip, 1 PCE
10068261	Dosing Tip, 1 PCE
10012382	Contact Filler, 30 g, transparent
10063106	Contact Filler, 30 g, black
10059034	CA-Remover, 12 ml
10051358	CA-Remover, 30 ml
10010887	Processing Spatula, 1 PCE

## Available sizes

10002033	Contact GEL, 20 g
10018589	Contact GEL, 30 g

## Conversion table

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$	$\text{Nm} \times 8.851 = \text{lb}\cdot\text{in}$
$\text{mm}/25.4 = \text{inch}$	$\text{Nm} \times 0.738 = \text{lb}\cdot\text{ft}$
$\mu\text{m}/25.4 = \text{mil}$	$\text{Nm} \times 141.62 = \text{oz}\cdot\text{in}$
$\text{N} \times 0.225 = \text{lb}$	$\text{mPa}\cdot\text{s} = \text{cP}$
$\text{N}/\text{mm}^2 \times 145 = \text{psi}$	$\text{N}/\text{cm} \times 0.571 = \text{lb}/\text{in}$
$\text{MPa} \times 145 = \text{psi}$	$\text{kV}/\text{mm} \times 25.4 = \text{V}/\text{mil}$

To the product detail page:



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