2-Component Adhesives and Sealants

Contact Cyanoacrylate Adhesives

VA 2407 Cyanoacrylate Adhesive



universally applicable | strong adhesion | fast curing

VA 2407 is a colourless and crystal clear curing two-component cyanoacrylate adhesive for bonding a wide variety of materials with and to each other. It adheres very well to many plastics (e.g. polycarbonate), steel, stainless steel, aluminium, ceramics, glass and rubber. The newly developed adhesive combines the advantages of instant adhesives with the process reliability of 2-component adhesives. The high-strength and fast-curing structural adhesive is sandable and paintable after approx. 25 minutes. It is resistant to weathering, many aggressive chemicals, impact stress and vibration. It is temperature-resistant from -20 °C to +120 °C (-40 to +248 °F). Depending on the geometry of the bond, gaps of up to 5 mm can be covered with VA 2407. Due to its fast and impact-resistant curing, it is particularly suitable for bonding e.g. plastic and rubber. It can also be used for structural adhesive bonding, where a coloured adhesive joint would affect the overall appearance of the component. VA 2407 bonds transparent plastics together, like Plexiglas and other materials, in a clean and visually appealing way. The adhesive is suitable for a wide variety of applications in plastic technology, mechanical construction, model and mould construction, metal construction, ship and boat building, bodywork and vehicle construction, trade fair and exhibition construction and many other areas of industry.

Characteristics

Specific properties		2C cyanoacrylate
Base		ethyl acrylate
Texture		pasty
Colour		transparent
Minimum shelf life	at room temperature	9 mon.
Minimum shelf life	from +2 °C to +7 °C	12 Mon.
- measured at		23 °C and 50 % relative humidity

Processing

Mixing ratio by weight		4:1
Viscosity	25 °C Cone / Plate	1.000 mPa·s
Density	(+20 °C)	1,1 g/cm³
Gap bridging up to max.		5 mm

Curing

Initial adhesion in seconds (shear strength: 0,1 MPa)		
- measured at		23 °C and 50 % relative humidity
on aluminium sandblasted		~4 sec.
on ABS untreated		~84 sec.
on rigid PVC		~55 sec.
Pot life	at 20 °C, 10 g batch	5 min.
Final strength	(100 % strength)	24 h

Mechanical properties after curing

Shear strength according to DIN EN 1465	
Steel sandblasted	16 - 21 MPa
Aluminium sandblasted	10 - 15 MPa
Rigid untreated PVC	10-14 MPa
Untreated ABS	13-15 MPa
PC (polycarbonate)	12 - 17 MPa

Thermal parameters

Temperature resistance		-20 °C to +120 °C
Softening temperature		+150 °C
Flashpoint		+87 °C (+189 °F)
Refraction index		~ 1,49 nD20
Thermal expansion coefficient		80 x 10^-6 m/(m·K)
Thermal conductivity	DIN EN ISO 22007-4	~0,1 W/m·K

Electrical parameters

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

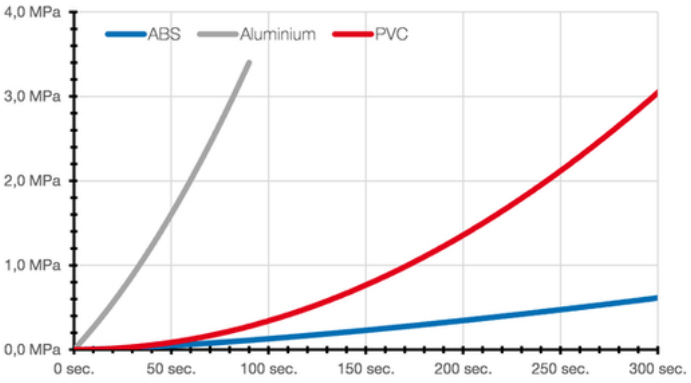
Approvals / Guidelines

MIL-Spec	complies with	-

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) must be observed.

Reaction rate of various materials



Curing time

Note
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VA 2407 Cyanoacrylate Adhesive

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. 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.

Application

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. 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^2.

Curing

After applying the product, the parts to be bonded must be joined quickly and fixed if possible, since the curing of the products is 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 humdity level between 40 % and 70 %. Below 40 %, the curing process is slowed down significantly or even prevented altogether. At an air humdity 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.

Storage

Store WEICON Contact Cyanoacrylate adhesives unopened at room temperature in a dry place, avoiding direct sunlight. Storage in a refrigerated environment (+2 °C bis +7 °C) increases the shelf life.

Scope of delivery

Mixing Nozzle 10:1 B | Adhesive

Accessories

10063091	Mixing Nozzle 10:1 B 10 g, 1 PCE, orange
10024317	Surface Cleaner, 150 ml, transparent
10024313	Surface Cleaner, 400 ml, transparent
10000275	CA Primer for Polyolefines, 10 ml
10000278	CA Primer for Polyolefines, 100 ml
10010887	Processing Spatula short, 1 PCE
10059295	Dispenser D50 10:1, 1 PCE
10023341	Special Piston, 1 PCE
10023115	Mixing Nozzle 10:1 B, 10 PCE, orange

Available sizes

10063086	VA 2407 Cyanoacrylate Adhesive, 10 g, transparent

Conversion table

(°C x 1.8) + 32 = °F	Nm x 8.851 = lb·in
mm/25.4 = inch	Nm x 0.738 = lb·ft
µm/25.4 = mil	Nm x 141.62 = oz·in
N x 0.225 = lb	mPa·s = cP
N/mm^2 x 145 = psi	N/cm x 0.571 = lb/in
MPa x 145 = psi	kV/mm x 25.4 = V/mil

To the product detail page:

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