

# Aluminium Minute Adhesive



**resistant to high temperatures | pasty | high impact resistance**

Adhesive for bonding aluminium and other light metals to each other. WEICON Aluminium Minute Adhesive can be used to fill cracks and holes, for example in aluminium housings, and for repairing light alloy wheels.

Aluminium Minute Adhesive is a low-odour, two-component, aluminium-filled epoxy adhesive. It is resistant to high temperatures up to +180 °C and cures quickly at room temperature. After curing, the adhesive can be machined (filing, drilling, milling). Aluminium Minute Adhesive is gap-filling and non-dripping (thixotropic) and offers very high tensile and impact strength. To achieve optimal adhesion, the bonding surfaces should be dry and free from grease or dirt. Scraping or sanding the surfaces before cleaning additionally improves adhesion.

## Characteristics

Base	Epoxy
Filler	filled
Texture	viscous
Colour	aluminium
Minimum shelf life	at room temperature 18 mon.

## Processing

Processing temperature	+15 °C to +40 °C
Component temperature	>3°C above dew point
Cure temperature	+6 °C to +40 °C
Relative air humidity	max. 85%
Mixing ratio by volume	1:1
Viscosity of the mixture	at +20 °C 11.000 mPa·s
Density of the mixture	1,2 g/cm <sup>3</sup>
Gap bridging up to max.	4 mm

## Curing

Pot life	at 20 °C, 10 g batch	4-5 min.
Handling strength	(35 % strength)	30 min.
Working strength after	(80 % strength)	1 h
Final strength	(100 % strength)	24 h
Shrinkage		0,8 %

## Mechanical properties after curing

- Measured after curing at		24 h RT + 24 h 60 °C
Tensile strength	DIN EN ISO 527-2	34 N/mm <sup>2</sup>
Elongation at break (tensile)	DIN EN ISO 527-2	1,1 %
E-modulus (tensile)	DIN EN ISO 527-2	2.200 - 2.700 MPa
Compressive strength	DIN EN ISO 604	40 MPa
Bending strength	DIN EN ISO 178	58 MPa
Hardness (Shore D)	DIN ISO 7619	76 ± 3
Lap shear strength material thickn. 1,5mm DIN EN 1465		
	Steel 1.0338 sandblasted	18 N/mm <sup>2</sup>
	Stainless steel V2A sandblasted	19 N/mm <sup>2</sup>
	Aluminium sandblasted	15 N/mm <sup>2</sup>
	Galvanized steel	17 N/mm <sup>2</sup>
	PVC-rigid roughened	11 N/mm <sup>2</sup>

## Thermal parameters

Temperature resistance	-50 °C to +180 °C (-58 °F to +356 °F)
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## Electrical parameters

Dielectric strength	DIN EN 60243-1 (20°C)	16 kV/mm
Magnetic		no

## 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.

## Surface Pre-Treatment

Clean and dry bonding surfaces are essential for flawless adhesive bonding (e.g. cleaning and degreasing with WEICON Surface Cleaner).

## Application

WEICON Aluminium Minute Adhesive can be processed straight from the double cartridge. Dismiss the first centimetre of the adhesive bead. Mix product thoroughly. Apply adhesive to the bonding surface quickly. Then join both bonding surfaces immediately.

## Storage

WEICON epoxy adhesives should be stored in a dry place at room temperature. Unopened containers can be stored at temperatures from +18 °C to +25 °C. Protect from direct sunlight. Failure to observe these storage instructions will reduce the shelf life to 6 months. Epoxy resins generally tend to crystallise at temperatures below +5 °C. This effect is increased by large temperature fluctuations, e.g. during transport especially in the winter months. This has a negative impact on processing, curing and technical data, can, however, be reversed by heating the product (up to max. +50 °C, no open flame). In WEICON epoxy

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adhesives, crystallisation is reduced by the careful choice and combination of base resins (bisphenol A and F).

## Accessories

- 10005236 Quadro Mixing Nozzle A, 1 PCE, blue
- 10068261 Dosing Tip A Size 0,5 mm, 1 PCE

## Conversion table

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{mm}/25.4 = \text{inch}$   
 $\mu\text{m}/25.4 = \text{mil}$   
 $\text{N} \times 0.225 = \text{lb}$   
 $\text{N}/\text{mm}^2 \times 145 = \text{psi}$   
 $\text{MPa} \times 145 = \text{psi}$

$\text{Nm} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{Nm} \times 0.738 = \text{lb}\cdot\text{ft}$   
 $\text{Nm} \times 141.62 = \text{oz}\cdot\text{in}$   
 $\text{mPa}\cdot\text{s} = \text{cP}$   
 $\text{N}/\text{cm} \times 0.571 = \text{lb}/\text{in}$   
 $\text{kV}/\text{mm} \times 25.4 = \text{V}/\text{mil}$

## Available sizes

- 10051229 Aluminium Minute Adhesive, 24 ml, aluminium
- 10058776 Aluminium Minute Adhesive, 24 ml (Set), aluminium

To the product detail page:



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## Chemical resistance after curing\* (Excerpt)

1,4-Dioxane	-	Glycol	+
Exhaust fumes	+	Uric acid	-
Adipic acid	-	Impregnating oils	+
aliphatic hydrocarbons	+	Iodides (K, Na etc.)	-
Formic acid >10 % (methanoic acid)	-	Potassium carbonate	+
Ammonia anhydrous 25%	-	Potassium hydroxide 0-20 % (caustic potash)	+
Aniline	-	Milk of lime	+
aromatic hydrocarbons	+	Cresol	-
Barium hydroxide	+	Magnesium hydroxide	+
Benzoic acid	-	Maleic acid (cis-ethylenedicarboxylic acid)	-
Benzyl alcohol	-	Methanol (methyl alcohol ) <85 %	o
Benzyl chloride	-	Methylene chloride	-
Boric acid	-	Mineral oil	+
Bromides	-	Naphthalene	+
Butadiene (1,3-)	-	Sodium bicarbonate (sodium hydrogen carbonate)	+
Butyric acid	-	Sodium carbonate (soda)	+
Butyl acetate	o	Sodium chloride (table salt)	+
Butyl alcohol	o	Nitrates	-
Calcium hydroxide (slaked lime)	+	Nitrobenzene	-
Chloroanilines	-	Oils, vegetable and animal	+
Chloroform (trichlormethane)	-	Oxalic acid <25 % (ethanedioic acid)	o
Chlorosulphuric acid (wet and dry)	-	Perchloraethylene	-
Chlorosilanes	-	Kerosene	+
Chlorinated water (swimming pool concentration)	-	Phenol	-
Chromates (K, Na, etc.)	-	Phosphoric acid <50%	+
Chromic acid	-	Phthalic acid, phthalic anhydride	-
Cyanides (K, Na etc.)	-	Nitric acid <5%	-
Cyclohexanone	-	Sulphur dioxide (wet and dry)	-
Diethyl ether	+	Carbon disulphide	-
Mineral oil and mineral oil products	+	Sulphuric acid <5%	+
Acetic acid diluted <5%	o	Soap solution	+
Ethanol <85 % (ethyl alcohol)	o	Turpentine	+
Greases, oils and waxes	+	Carbon tetrachloride (tetrachloromethane)	-
Hydrofluoric acid	-	Tetralin (tetrahydronaphthalene)	-
Tannic acid diluted <7%	o	Trichloraethylene	-
Glycerin (trihydroxipropane)	+	Hydrogen peroxide <30 % (hydrogen superoxide)	o

+ = resistant 0 = for a limited time - = not resistant \*The storage of all WEICON Plastic Metal types was carried out at +20°C chemical temperature.

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