Epoxy Resin Systems
Epoxy adhesives

Epoxy Minute Adhesive



high-temperature resistant | viscous | fast-curing

WEICON Epoxy Minute Adhesive is a universally applicable, two-component epoxy resin system. The adhesive is resistant to high temperatures up to +180 °C, viscous and self-levelling. It has a very short pot life and cures quickly. Epoxy Minute Adhesive bonds many different materials to each other, such as metal, plastic, fibre composite, ceramic, glass, stone or wood.

The transparent adhesive is suitable for craft applications or demanding DIY projects. It can also be used in trade fair and shop fitting, as well as for construction and assembly work.

Characteristics		
Base		Epoxy
Filler		unfilled
Texture		liquid
Colour		transparent, light yellow
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	6.000 mPa·s
Density of the mixture		1,2 g/cm³
Gap bridging up to max.		2 mm
Curing		
Pot life	at 20 °C, 10 g batch	4-5 min.
Handling strength	(35 % strength)	13 min.
Working strength after	(80 % strength)	20 min.
Final strength	(100 % strength)	24 h
Shrinkage		1,41 %

Mechanical properties after curing		
- Measured after curing at		24 h RT + 24 h 60 °C
Tensile strength	DIN EN ISO 527-2	37 N/mm²
Elongation at break (tensile)	DIN EN ISO 527-2	1,9 %
E-modulus (tensile)	DIN EN ISO 527-2	1.800 - 2.200 MPa
Bending strength	DIN EN ISO 178	58 MPa
Hardness (Shore D)	DIN ISO 7619	82 ±3
Lap shear strength material thickn. 1,5mm DIN EN 1465		
Steel 1.0338 sandblasted		18 N/mm²
Stainless steel V2A sandblasted		24 N/mm²
Aluminium sandblasted		10 N/mm²
Galvanized steel		13 N/mm²
PVC-rigid roughened		13 N/mm²
Thermal parameters		
Temperature resistance		-50 °C to +180 °C (-58°F to +356°F)
Tg after curing at room temperature	(DSC)	44,7 °C
Tg after tempering (at 90°C)	(DSC)	46,1 °C
Temperature conductivity		0,133 mm²/s
Thermal conductivity	DIN EN ISO 22007-4	0,24 W/m·K
Heat capacity	DIN EN ISO 22007-4	1,482 J/(g·K)
Electrical parameters		
Resistance		$1{,}03 \cdot 10^{11}$ Ω·m
Dielectric strength	DIN EN 60243-1 (20°C)	20 kV/mm
Magnetic		no
Approvals / Guidelines		
ISSA Code		75.629.50
IMPA Code		812980

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 pretreatment

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

Application

WEICON Easy-Mix products can be processed straight from the double cartridge by means of the included static mixer. Dismiss the first 5 cm of the adhesive bead. The adhesive is applied to just one side. The specified pot life refers to a material batch of 10 ml at room temperature. Larger batch quantities will result in faster curing. Higher temperatures also reduce the pot life and curing time. (General rule: every increase by +10 °C above room temperature results in a decrease of the pot life and curing time by half). Temperatures below +16 °C increase the pot life and curing time significantly. From approx. +5 °C and below, no reaction takes place.

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

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WEICON Middle East L.L.C.
United Arab Emirates
phone +971 4 880 25 05
info@weicon.ae

WEICON Czech Republic s.r.o.
Czech Republic
phone +42 (0) 417 533 013
info@weicon.cz

WEICON GmbH & Co. KG
(Headquaters) Germany
phone +49 (0) 251 9322 0
info@weicon.de

WEICON Romania SRL
Romania
phone +40 (0) 3 65 730 763
office@weicon.com

WEICON South East Asia Pte Ltd
Singapore
Phone (+65) 6710 7671
info@weicon.com.sg

WEICON Colombia S.A.S
Colombia
Phone: +57 314 793 86 06
Email: info@weicon.co

WEICON Inc.
Canada
phone +1 877 620 8889
info@weicon.ca

WEICON Ibérica S.L.
Spain
phone +34 (0) 914 7997 34
info@weicon.es

WEICON Italia S.r.L.
Italy
phone +39 (0) 010 2924 871
info@weicon.it

WEICON SA (Pty) Ltd
South Africa
phone +27 (0) 21 709 0088
info@weicon.co.za

WEICON Kimya Sanayi Tic. Ltd. Şti.
Türkiye
phone +90 (0) 212 465 33 65
info@weicon.com.tr

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

Scope of delivery

Adhesive

Accessories

10005236 Quadro Mixing Nozzle A, 1 PCE, blue

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

Available sizes

10000133	Epoxy Minute Adhesive, 24 ml, transparent, light yellow
10057686	Epoxy Minute Adhesive, 24 ml (Set), transparent, light yellow

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	+
Diethyl ether	+	Iodides (K, Na etc.)	-
aliphatic hydrocarbons	+	Potassium carbonate	+
Formic acid >10 % (methanoic acid)	-	Potassium hydroxide 0-20 % (caustic potash)	+
Ammonia anhydrous 25%	-	Milk of lime	+
Aniline	-	Phenol	-
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	-	Oxalic acid <25 % (ethanedioic acid)	o
Chloroform (trichlormethane)	-	Perchloraethylene	-
Chlorosulphuric acid (wet and dry)	-	Kerosene	+
Chlorosilanes	-	Oils, vegetable and animal	+
Chlorinated water (swimming pool concentration)	-	Phosphoric acid <50%	+
Chromates (K, Na, etc.)	-	Phthalic acid, phthalic anhydride	-
Chromic acid	-	Nitric acid <5%	-
Cyanides (K, Na etc.)	-	Sulphur dioxide (wet and dry)	-
Cyclohexanone	-	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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