

WEICON Easy-Mix HT 180 Epoxy Adhesive



High temperature resistance | steady | shock- and impact resistant

WEICON Easy-Mix HT 180 is a 2-component adhesive based on epoxy resin with high temperature resistance up to +180 °C (+356 °F); short-term up to +230 °C (+446 °F). The adhesive is highly viscous and stable which also makes it suitable for vertical applications. It is impact- and shock-resistant, has a long pot life, cures at room temperature and is machinable after curing. The adhesive is particularly suitable for the bonding of composite materials and metal and can be spot-welded while curing. Easy-Mix HT 180 can also be used on plastics, ceramics, glass, stone or wood and is suitable for adhesions where larger tolerances have to be bridged. Due to special fillers, it is possible to achieve a non-varying and reliable adhesive joint of at least 0.20 - 0.25 mm. The high temperature resistance enables the bonding of components, which are thermo-coated (powder-coated) after curing.

Characteristics

Base	Epoxy resin, mineral-filled	
Texture	pasty, gap-filling	
Colour	black	
Minimum shelf life	at room temperature	24 mon.

Processing

Processing temperature	+10 °C to +40 °C	
Curing temperature	+10 °C - +50 °C	
Mixing ratio by weight	2:1	
Density of the mixture	1,1 g/cm ³	
Gap bridging up to max.	4 mm	

Curing

Pot life	at 20 °C, 10 ml batch	60 min.
Handling strength	(35 % strength)	120 min.
Working strength after	(50 % strength)	4 h
Final strength	(100 % strength)	24 h
Shrinkage		0,3 %

Mechanical properties after curing

Tensile strength	DIN EN ISO 527-2	27 MPa
E-modulus (tensile)	DIN EN ISO 527-2	2.300 - 2.700 MPa
Compressive strength	DIN EN ISO 604	52 MPa
Bending strength	DIN EN ISO 178	46 MPa
Hardness (Shore D)	DIN ISO 7619	80
Lap shear strength material thckn. 1,5mm DIN EN 1465		

Steel 1.0338 sandblasted	23 N/mm ²
Stainless steel V2A sandblasted	24 N/mm ²
Aluminium sandblasted	13 N/mm ²
Galvanized steel	8 N/mm ²
PVC-rigid roughened	11 N/mm ²
CFRP	22 N/mm ²

Thermal parameters

Temperature resistance		-50 °C to 180 °C, briefly up to +230 °C
Tg after curing at room temperature	(DSC)	54,4 °C
Tg after tempering (at 120°C)	(DSC)	44,7 °C
Temperature conductivity		0,172 mm ² /s
Thermal conductivity	DIN EN ISO 22007-4	0,26 W/m·K
Heat capacity	DIN EN ISO 22007-4	1,335 J/(g·K)

Electrical parameters

Resistance	DIN EN 62631-3-1	2,48 · 10 ¹¹ Ω·m
Dielectric strength	DIN EN 60243-1 (20°C)	18 kV/mm

Approvals / Guidelines

ISSA Code	75.530.04
IMPA Code	812923

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.

Note

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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
(Headquarters) 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

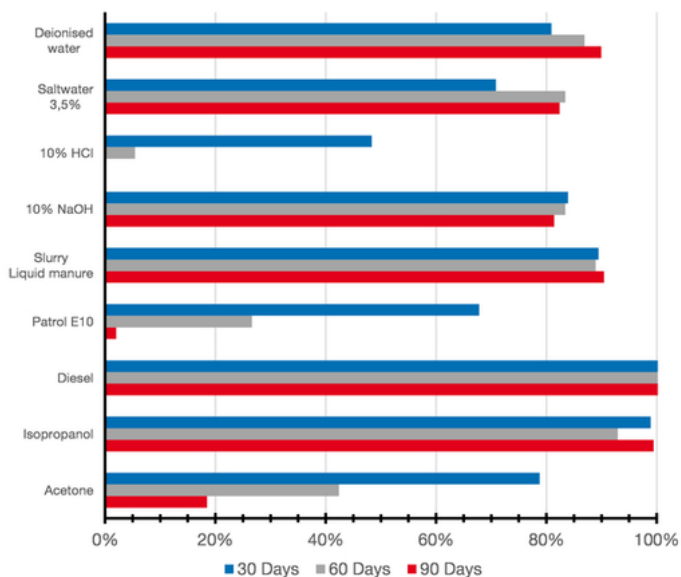
WEICON Kimya Sanayi Tic. Ltd. Şti.
Türkiye
phone +90 (0) 212 465 33 65
info@weicon.com.tr

WEICON Easy-Mix HT 180 Epoxy Adhesive

Epoxy Resin Systems

Epoxy adhesives

Tensile strength after storage



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 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 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

- 10005237 Dispenser Easy-Mix D 50, 1 PCE
- 10101999 WEICON Manual Dispenser, 1 x 1:1 | 2:1
- 10030395 Helix Mixing Nozzle B, 1 PCE, white

Conversion table

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

Available sizes

- 10044884 WEICON Easy-Mix HT 180 Epoxy Adhesive, 50 ml, black

To the product detail page:



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Colombia
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Canada
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Spain
phone +34 (0) 914 7997 34
info@weicon.es

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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.
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Epoxy Resin Systems

Epoxy adhesives

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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