

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

Processing

Processing temperature	+10°C to +40°C
Curing temperature	+10 °C - +50 °C
Cure temperature	+10 to +50
Mixing ratio by weight	2:1
Viscosity of the mixture	pastös
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
MIL-Spec	comply with	MIL-C-24176

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).

Processing

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

Note
Alle in diesem Technischen Datenblatt enthaltenen Angaben und Empfehlungen stellen keine zugesicherten Eigenschaften dar. Sie beruhen auf unseren Forschungsergebnissen und Erfahrungen. Sie sind jedoch unverbindlich, da wir für die Einhaltung der Verarbeitungsbedingungen nicht verantwortlich sein können, da uns die speziellen Anwendungsverhältnisse beim Verwender nicht bekannt sind. Eine Gewährleistung kann nur für die stets gleichbleibende hohe Qualität unserer Erzeugnisse übernommen werden. Wir empfehlen, durch ausreichende Eigenversuche festzustellen, ob von dem angegebenen Produkt die von Ihnen gewünschten Eigenschaften erbracht werden. Ein Anspruch daraus ist ausgeschlossen. Für falschen oder zweckfremden Einsatz trägt der Verarbeiter die alleinige Verantwortung.

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below +16 °C increase the pot life and curing time significantly. From approx. +5 °C and below, no reaction takes place.

Storage

When unopened and stored at a constant room temperature of approx. +20 °C in a dry place, WEICON HT 180 has a shelf life of at least 24 months. Protect from direct sunlight. In case of non-observance of these storage instructions, the shelf life is reduced to 6 six months. In general, epoxy resins 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 combinations of base resins (bisphenol A and F).

Scope of delivery

Adhesive | Helix Mixing Nozzle

Accessories

- 10653050 Dispenser Easy-Mix D 50, 1 PCE
- 10650006 Helix Mixing Nozzle, 1 PCE

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

- 10650850 WEICON Easy-Mix HT 180 Epoxy Adhesive, 50 ml, black

To the product detail page:



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