

Easy-Mix RK-7100 Structural Acrylic Adhesive



Fast-curing | high-strength | impact-resistant | residual elasticity

The structural acrylic adhesive WEICON Easy-Mix RK-7100 can be used to bond numerous materials, such as plastics, metals and ceramics with high tensile, shear and peel strength. It is particularly suitable for structural bondings where high strength connections are required. It is highly viscous and is therefore suitable for processing on vertical surfaces. RK-7100 is universally applicable and can be used, for example, in plastics technology, in metal construction, in car body and vehicle construction, in mechanical engineering, in electrical engineering, model and mould making, and in trade show and exhibition construction.

Characteristics

Base	methyl methacrylate	
Texture	viscous	
Minimum shelf life	at room temperature	12 mon.

Processing

Processing procedure	Easy-Mix	
Processing temperature	+10°C to +40°C	
Curing temperature	> +16 °C	
Mixing ratio by weight	1:1	
Viscosity of the mixture	40.000-60.000 mPa·s	
Density of the mixture	0,98-1,02 g/cm³	
Gap bridging up to max.	5 mm	

Curing

Pot life	at 20 °C	5 min.
Handling strength	(35 % strength)	25 min.
Working strength after	(50 % strength)	60 min.
Final strength	(100 % strength)	12 h

Note

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Mechanical properties after curing

Tensile strength	DIN EN ISO 527-2	24 N/mm ²
Elongation at break (tensile)	DIN EN ISO 527-2	28 %
E-modulus (tensile)	DIN EN ISO 527-2	1200 - 1700 MPa
Lap shear strength material thickn. 1,5mm DIN EN 1465		
Steel 1.0338 sandblasted		23 N/mm ²
Stainless steel V2A sandblasted		22 N/mm ²
Aluminium sandblasted		20 N/mm ²
PVC-rigid roughened		12 N/mm ²
CFRP		22 N/mm ²
ABS		7 N/mm ²
PC (polycarbonate)		12 N/mm ²
GFRP		21 N/mm ²
PMMA		9 N/mm ²
Polyamide 6.6		1 N/mm ²

Thermal parameters

Temperature resistance	-55°C to +125°C	
Tg after curing at room temperature	(DSC)	-40,3 °C
Temperature conductivity	0,125 mm ² /s	
Thermal conductivity	DIN EN ISO 22007-4	0,22 W/m-K
Heat capacity	DIN EN ISO 22007-4	1,517 J/(g·K)

Electrical parameters

Resistance	DIN EN 62631-3-1	6,26 · 10 ¹⁰ Ω·m
Dielectric strength	DIN EN 60243-1 (20°C)	24 / 30 (*6150) kV/mm

Approvals / Guidelines

MIL-Spec	complies with	MIL-A-47284A
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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

For a flawless adhesive bond, surfaces must be clean and dry (e.g.

clean and degrease with Surface Cleaner). Higher strengths can be achieved by further pre-treatment of the surfaces, such as roughening by blasting or grinding. Some low-energy plastics, especially PTFE and polyolefins etc., can only be bonded after special pre-treatment of the surfaces by e.g. fluorination, low-pressure plasma, corona, flame treatment, or similar.

Application

RK-7100 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

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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 acrylic structural adhesives should be stored in a dry place at a constant room temperature. Unopened containers can be stored at temperatures from +18 °C to +25 °C. Protect from direct sunlight. Storage in a refrigerated environment increases the shelf life.

Scope of delivery

Adhesive | Quadro Mixing Nozzle A

Accessories

- 10005237 Dispenser Easy-Mix D 50, 1 PCE
- 10005236 Quadro Mixing Nozzle A, 1 PCE, blue
- 10068261 Dosing Tip, 1 PCE
- 10101999 WEICON Manual Dispenser, 1 x 1:1 | 2:1

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/mm² x 145 = psi	N/cm x 0.571 = lb/in
MPa x 145 = psi	kV/mm x 25.4 = V/mil

Available sizes

- 10030534 Easy-Mix RK-7100 Structural Acrylic Adhesive, 50 ml, off-white, milky
- 10051232 Easy-Mix RK-7100 Structural Acrylic Adhesive, 50 ml, black

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