

Flex 310 Polyurethane



Adhesive and sealant based on PU | strong | permanently elastic | ISEGA-certified

WEICON Flex 310 PU is permanently elastic, strong, paintable, and resistant to weather, ageing, fresh and sea water and free of silicone. This versatile adhesive and sealant based on Polyurethane (PUR) can be used for the bonding and sealing of numerous materials such as metals, plastics, ceramics, wood, glass and stone. It can be used in tank and apparatus engineering, carriage, container and vehicle construction, in ventilation and air conditioning systems, the energy and electrical industry, and in all applications where silicones or products containing silicones are not suitable.

Characteristics

Base	1-C. polyurethane	
Texture	pasty	
Cure type	moisture-curing	
Can be painted	after complete curing	
Stability/run-off	ASTM D 2202	1.0 mm
Building material class	DIN 4102	B 2
Minimum shelf life	at room temperature	12 mon.

Processing

Curing condition	from +5°C to +35°C and 40% to 70% rel. air humidity	
Curing speed	in the first 24 h	2 -3 mm
Density	1,17 g/cm ³	
Max. sealing joint width	25 mm	
Gap bridging up to max.	5 mm	

Curing

Skin-over time	45 min.
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Mechanical properties after curing

Tensile strength	ISO 37	2 MPa
Tensile strength of the pure adhesive and sealant	ISO 37	2 MPa
Elongation at break (tensile)	DIN 53504/ASTM D412	450 %
Tear resistance	DIN 53515 / ASTM D 1002	9 kN/m
Hardness (Shore A)	DIN ISO 7619	45±5
Shear strength according to DIN EN 1465		
Medium lap shear strength (DIN EN 1465/ASTM D 1002)	1,6 MPa	
Volume change	DIN 52451	-6 %

Thermal parameters

Temperature resistance	-40 °C to briefly +90 °C (approx. 2 h) +120 °C
Tg after curing at room temperature	~ -45 °C

Approvals / Guidelines

ISSA Code	75.509.34
IMPA Code	812943

Surface Pre-Treatment

Surfaces must be clean and free of grease. Many surface soilings, such as oil, grease, dust and dirt can be removed with WEICON

Surface Cleaner. For heavily soiled metal surfaces, we recommend Cleaner Spray S; for removing old colour residues or adhesive

residues, WEICON Sealant and Adhesive Remover is ideal. Most materials can be bonded to and among each other. For certain materials or special requirements, we recommend the use of a

bonding agent (primer). Mechanical surface pre-treatment e.g. by grinding or sanding can also improve the adhesion considerably.

Application

Application methods Cartridge gun for 310 ml cartridges, compressed air gun, we recommend a version with piston rod (WEICON Compressed Air Cartridge Gun), automatic dosing systems. Joining the components In order to guarantee and ideal wetting, the bonding parts need to be joined, before the adhesive skins over (skin-over time).

Ageing

The test specimens were artificially aged according to DIN ISO 21194, Annex A, to assess their long-term durability.

After artificial ageing, Flex 310 PU with Primer K 200 or Activating Cleaner achieved grade 1 in the bead peel test on aluminium.

Note

The specifications and recommendations given in this technical data sheet must not be seen as guaranteed product characteristics. They are based on our laboratory tests and on practical experience. Since individual application conditions are beyond our knowledge, control and responsibility, this information is provided without any obligation. We do guarantee the continuously high quality of our products. However, own adequate laboratory and practical tests to find out if the product in question meets the requested properties are recommended. A claim cannot be derived from them. The user bears the only responsibility for non-appropriate or other than specified applications.

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Grade 1 means: more than 95% cohesive failure and less than 5% adhesive failure in the form of the adhesive peeling off the contact surface.

After artificial ageing, Flex 310 PU with Primer K 200 achieved grade 3 in the bead peel test on stainless steel (V2A).

Grade 3 means: 25 % to <75 % cohesive failure.

Storage

Store in the unopened original container at room temperature. Avoid sources of heat and direct sunlight.

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.

Accessories

- 10025241 V-Joint Nozzle, 1 PCE
- 10020751 Cartridge Gun Special, 1 PCE
- 10000441 Cartridge Gun, 1 PCE
- 10101992 Clip Nozzle Green Tube, 1 PCE, transparent
- 10059792 Pressure gun Airflow 3, 1 PCE

Available sizes

- 10104883 Flex 310 Polyurethane, 280 ml (Green Tube), black
- 10104863 Flex 310 Polyurethane, 280 ml (Green Tube), grey
- 10104873 Flex 310 Polyurethane, 280 ml (Green Tube), white
- 10104880 Flex 310 Polyurethane, 280 ml (plastic bag), black
- 10104860 Flex 310 Polyurethane, 280 ml (plastic bag), grey
- 10104870 Flex 310 Polyurethane, 280 ml (plastic bag), white
- 10104886 Flex 310 Polyurethane, 280 ml (Set), black
- 10104866 Flex 310 Polyurethane, 280 ml (Set), grey
- 10104876 Flex 310 Polyurethane, 280 ml (Set), white

Conversion table

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

To the product detail page:



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