

RK-1300 Structural Acrylic Adhesive



Pasty | strong | fast-curing

The structural acrylic adhesive WEICON RK-1300 has high impact, peel and shear strength. The system consists of one adhesive and one activator, which are used in the "no mix" procedure. This makes processing easier by eliminating mixing procedures. The product is particularly suitable for bonding large surfaces of many different materials such as metals, ferrites and rigid plastics. WEICON RK-1300 can be used in mechanical and apparatus engineering, vehicle construction, tool and mould making, the building and furniture industry, and in many other industrial areas.

Characteristics

| | |
|-------------------------|---------------------|
| Base | methyl methacrylate |
| Texture | pasty |
| Colour | beige, opaque |
| Minimum shelf life | at room temperature |
| Minimum shelf life | 12 mon. |
| Minimum shelf life | from +2 °C to +7 °C |
| 24 Mon. | |
| Processing | |
| Processing procedure | No-Mix |
| Processing temperature | +10°C to +40°C |
| Curing temperature | > +18 °C |
| Cure temperature | +18 |
| Viscosity | 21.000 mPa·s |
| Density of the mixture | 1.2 g/cm³ |
| Gap bridging up to max. | 0.4 mm |
| Curing | |
| Handling strength | (35 % strength) |
| Working strength after | 6 min. |
| Final strength | (50 % strength) |
| | 9 min. |
| | (100 % strength) |
| | 24 h |

Mechanical properties after curing

| Lap shear strength material thickn. 1,5mm DIN EN 1465 | |
|---|----------|
| Steel 1.0338 sandblasted | 25 N/mm² |
| Stainless steel V2A sandblasted | 25 N/mm² |
| Aluminium sandblasted | 20 N/mm² |
| PVC-rigid roughened | 7 N/mm² |
| CFRP | 24 N/mm² |
| ABS | 6 N/mm² |
| PC (polycarbonate) | 10 N/mm² |
| GFRP | 16 N/mm² |
| PMMA | 9 N/mm² |
| Polyamide 6.6 | 2 N/mm² |

Thermal parameters

| | |
|------------------------|--|
| Temperature resistance | -50 °C to +130 °C, briefly up to +180 °C |
|------------------------|--|

Approvals / Guidelines

| | |
|-----------|-----------------------------|
| ISSA Code | 75.629.52 |
| IMPA Code | 812991 |
| MIL-Spec | complies with MIL-PRF-23400 |

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). Higher strengths can be achieved by further pre-treatment of the surfaces, such as roughening by blasting or grinding. Some plastics, especially polyamides, PTFE, polyolefines 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

Processing the RK Activator: Depending on the size of the bonding gap, the RK Activator is applied to one or both sides of the bonding surfaces (brush, spray, dip). For adhesive gaps up to max. 0.4 mm, a single-sided application is sufficient; for adhesive gaps up to max. 0.8 mm and/or rough, porous as well as passive surfaces (chrome, nickel, etc.), a double-sided application is required. For smooth plastic and metal surfaces approx. 30 g/m², for rough and porous surfaces up to 150 g/m² activator are required. The flash-off time is at least 5 minutes at room temperature (+20°C). A significant advantage over other adhesive systems is that the coated workpieces can be stored at room temperature (+20°C) for up to 30 days without the effectiveness decreasing. **Processing of the RK Adhesive:** The adhesive is only applied on to side and usually to the surface not coated with activator. The bonding gap can be up to 0.80 mm (only with activator applied to both sides). Adhesive joints with a thickness of 0.15 mm to 0.25 mm generally have the highest tensile shear strength. For smooth plastic and metal surfaces approx. 180 g/m², for rough and porous surfaces up to 300 g/m² activator are

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required. Processing temperature: The processing should be done at room temperature (+20°C). Higher temperatures e.g. +40°C shorten the positioning and curing times by approx. 30%; low temperatures around +10°C increase the respective times by approx. 50%, until from +5°C almost no reaction takes place.

Storage

RK adhesive and RK activator:

WEICON RK construction 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. If the storage temperature exceeds +40 °C and the air humidity is high, the shelf life is reduced to 6 months.

Scope of delivery

RK1300 mass | Activator | Wooden spatula | Tip for RK1300/1500

Accessories

10010887 Processing Spatula, 1 PCE
 10022562 Processing Spatula, 1 PCE
 10032350 Primer Applicator, 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

10000118 RK-1300 Structural Acrylic Adhesive, 60 g, beige, opaque
 10007378 RK-1300 Structural Acrylic Adhesive, 1 kg, beige, opaque
 10007508 RK-1300 Structural Acrylic Adhesive, 0,33 kg, beige, opaque
 10100094 RK-1300 Structural Acrylic Adhesive, 6 kg, beige, opaque

To the product detail page:



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