ADHESIVES & SEALANTS

Weicon RK-7100
Structural Acrylic Adhesive

Weicon RK-7100 Construction adhesive is 2-part adhesive system that are based on methacrylate and cure at room temperature to form very high strength bonds to a wide range of materials. These adhesives are easily processed using a “no-mix” procedure whereby polymerisation starts as soon as the adhesive and the activator-wetted components are joined together. This means there’s no measuring of portions, mixing or risk of cure failure due to issues with the mix.
RK-7100 cures to form incredibly high strength bonds that exhibit high tensile, shear and impact strengths. They exhibit a rapid strength build-up and withstand many chemicals and various weather conditions.

Weicon RK-7100 adhesive is used to bond a wide variety of materials. These include:

- Plastics (such as PVC, ABS, PMMA, Fibreglass and Phenols)
- Polyurethane
- Epoxies
- Steel, Aluminium and Stainless Steel
- Wood, Ceramics and many more

Weicon RK-7100 Construction Adhesives are often used as a replacement or alternative to traditional fixing or fastening methods like screws or welding. Compared to these methods, they offer several advantages which include:

- They do not change or damage the material surface
- Tensioning of the material caused by thermal or mechanical stress is eliminated
- The specific material characteristics of the materials being bonded are not altered
- They often allow for the use of thinner and/or lighter and more cost-effective materials that cannot be joined using traditional fastening methods
- When cured, the adhesives automatically form a leak-proof coating which prevents fretting corrosion
- They eliminate contact corrosion which can occur when joining different materials

Features & Benefits

- High tensile, shear and impact strengths
- High viscosity, can be applied with great accuracy (even to vertical surfaces)
- Rapid strength build-up
- Used indoors and outdoors
- Resistant to weathering and many chemicals
- Can be grinded or over-painted
- Withstand temperatures up to 125ºC

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Typical Applications:

- Plastics engineering and construction
- Machine building
- Model and mould construction
- Metal construction
- Electrical engineering
- Wood construction
- Heating, ventilation and air-conditioning
- Vehicle construction and repairs
- Interior construction and design

Technical Data:

Basis		Methyl Methacrylate
Mixing Ratio (Resin / Hardener)		1 : 1
Colour After Curing		Creamy White, Milky
Density of the Mixture		0.98 – 1.02 g/cm³
Pot Life at 20ºC (10ml of Adhesive)		5 Minutes (approx.)
Viscosity of the Mixture		40,000 – 60,000 MPa
Handling Strength (35%) After		25 Minutes (approx.)
Mechanical Strength (50%) After		60 Minutes (approx.)
Final Strength (100%) After		12 Hours (approx.)
Adhesive Gap Bridging		0.1mm – 5mm
Average Tensile Shear Strength In accordance with DIN53281-83	On FVK (GRP) 3mm	8 N/mm²
	On Plastic (PVC) 0.76mm	21 N/mm²
	On Aluminium 0.26mm	24 N/mm²
	On Steel (Bright) 0.26mm	23 N/mm²
	On Stainless Steel 0.26mm	15 N/mm²
	On PMMA 0.76mm	23 N/mm²
Average E-module (+20ºC)		1,300 – 1,700 N/mm²
Shore Hardness D (DIN EN ISO 868)		75
Tensile Strength ISO 527 (Max.)		22 N/mm²
Tensile Extension ISO 527 (Max.)		30%
Temperature Resistance		-55ºC to +125ºC

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Chemical Resistance After Curing:

Acetone	+	Isopropyl Acetate	+
Acidic Vapours	+	Isopropyl Alcohol	+
Alcohol	+	Isopropyl Ether	+
Aliphatic Hydrocarbons	+	Kerosene	+
Alkaline Vapours	+	Ketone	+
Ammonia, Ammonium Chloride	+	Lubricating Oils & Greases	+
Aromatic Hydrocarbons	O	Mercury	+
Benzoyl	O	Methanol (Methyl Alcohol)	+
Benzoyl Acid	+	Methyl Benzoyl	+
Bile Medium (Bilge Water)	+	Methyl Chloride	O
Brake Fluid	+	Methyl Ethyl Ketone	+
Bromide Solution	O	Methyl Isobutyl Ketone	+
Butyl Alcohol (Isobutanol)	+	Methylene Dichloride	+
Calcium Chloride (Sea Salt)	+	Mineral Oil	+
Calcium Sulphate	+	Mineral Turpentine	+
Calcium Sulphite	+	Nitric Acid (5%)	+
Chlorinated Hydrocarbons	+	Nitric Acid (Fuming)	-
Chlorinated Salt Water	+	Oxygen	-
Chlorinated Solvents	-	Ozone	-
Chlorinated Water	+	Paraffin oil (Kerosene)	+
Chlorine Alcohol	+	Perchlomethylmercaptan	+
Chlorine Bleach	-	Persulfuric Acid (5%)	+
Chlorine Gas (Liquid & Dry)	-	Petrol	+
Chlorine Sulphuric Acid	-	Phenol (Carbolic Acid)	+
Chlorine (Liquid & Dry)	-	Phenol Resin	+
Chloroform	+	Phosphoric Acid (5%)	+
Chromatic Acid (5%)	+	Phthalic Acid	+
Cooling Lubricants	+	Polyphosphoric Acid (5%)	+
Corrosive Ammonium, Ammonium Hydroxide	O	Potassium Carbonate (Potash)	+
		Propyl Alchol	+
Cylinder Oil	+	Selenium Chloride	+
Dichloroethylene Ether	+	Silicon Oils	+
Epichlorohydrin	+	Sulphur Dioxide (Wet & Dry)	+
Freon	O	Sulphur Trioxide Gas	-
Fuel (Jet or Turbine)	+	Sulphuric Acid	O
Glycocol, Glycine	+	Sulphuric Acid (Fuming)	-
Heating Oil (Diesel)	+	Tannic Acid	O
Heptane	+	Toulene	O
Hydrochloric Acid	O	Toulene Sulphuric Acid	O
Hydrocyanic Acid (Prussic Acid 5%)	+	Trichloroethylene	+
Hydrogen Bromide (5%)	+	Turpentine, Turpentine Oil	+
Hydrogen Chloride	+	Waste Water	+
Hydrogen Fluoride (Hydrofluoric Acid)	-	Water	+
Hydrogen Peroxide	O	Water (Boiling)	O
Hydrogen Sulphide (Wet & Dry)	+	Water (Distilled)	+
Isobutyl Alcohol (Isobutene)	+	Xylene (Dimethylbenzoyl)	O

+ = Resistant O = Resistant for a Limited Time - = Not Resistant

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Preparation of the Surface:
To ensure a perfect bond, the surface to which these adhesives will be applied must be clean and dry (Weicon Cleaner S, Surface Cleaner or Plastic Cleaner may be ideal for this task). Best results will be achieved when smooth surfaces are mechanically roughened. Some low energy plastics (e.g. PTFE) can onlybe bonded after special surface pre-treatment (e.g. fluorination, etching, corona, flame treatment).

Processing of 50gm Double Cartridge Packs:
Mixing and application occur automatically as the adhesive travels down the Quadro Mixing Nozzle. Apply theadhesive to one of the surfaces being bonded.

General Processing Information:
RK-7100 Construction Adhesive will bridge a gap between 0.1mm and 5mm. The pot life given is for a material quantity of 10ml at room temperature (20ºC approx.). Higher ambient temperatures shorten the cure time (as a rule of thumb, every 10ºC increase above room temperature will halve working and cure time). Temperatures below +16ºC will extend working and cure times considerably while below +5ºC no reaction will occur at all.

Physiological properties / health and safety at work:
Weicon RK Construction Adhesives, when properly handled and completely cured, are toxicologically harmless. When using this product, the physical, safety, technical, toxicological and ecological data andregulations in the SDS must be observed.

Storage:
Weicon RK Construction Adhesives have a shelf-life of at least 12 months if stored in a dry room with a relatively constant temperature of about 20ºC. If stored in temperatures between +1ºC and +7°C, shelf life canbe extended up to 24 months. This applies to the closed original containers which are not significantly exposed to UV. If stored in temperatures exceeding 40ºC and with high humidity, the shelf-life is shorted to 6 months.

Availability:
Weicon RK-7100 is available in 50gm double cartridge packs. Each pack is supplied withone Quadro Mixing Nozzle. Extra mixing nozzles and the Easy-Mix D 50 Dispenser are available separately if required.

Associated Gaskets also stock a large range of thermal insulation as well as specialised sealing and electrical products. For more information on these products and many more, please visit our website or call your nearest AG branch.

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