

Technical Data Sheet

Our RK-1500 Two-Part, No-Mix, High Strength Liquid Acrylic Adhesive is a professional-quality structural adhesive used by a range of industries. Based on methyl methacrylate (MMA), this is a liquid form of acrylic glue that is ideal for large surface areas where it needs to be evenly spread.

Bonds made with RK-15000 Structural Acrylic are incredibly strong and long lasting. They exhibit high impact, peel and shear strength.

This acrylic adhesive is quite similar to our RK-1300 with the main difference being the consistency. Rk-1300 is a lot pastier and is a better choice for bonding vertical surfaces.

Manufactured in Germany by Weicon, RK-1500 is a high-performance MMA Adhesive with a variety of benefits and performance traits.

This industrial grade acrylic glue is very easy to use (the video below shows this). Though it is a two-part adhesive, there's no mixing or measuring involved. For close fitting joints (i.e. those with a bonding gap of 0.4mm or below), simply apply the pasty glue to one side and spread. Once done, apply the activator to the other and join the two parts (for larger bonding gaps up to 0.8mm, apply the activator to both sides).

Once the two bonding surfaces have been joined, the adhesive will set fast. At a room temperature of 20°C, RK-1300 Acrylic Glue achieves 35% cure in just 5 minutes and hits 50% of its final strength after 8 minutes. It will be fully cured within 24 hours.

One additional benefit of the adhesive + activator "No Mix" process used with this glue is time. Parts coated with just the adhesive can be stored for up to 30 days (at room temperature) without losing effectiveness. This could be a real benefit for anyone with multiple parts to bond as they can prep multiple items with just the adhesive before proceeding to apply the activator and join sequentially.

Applications

- Joining of plastic parts and components for sign making.
- Laminating sheets of metal.
- Joining of metal sections and channels.
- In the stainless-steel industry for construction and manufacturing work.
- In the marine sector for boat manufacturing and heavy repairs.
- In the auto industry for car body work.
- In electronics manufacturing for joining plastic and metal parts.
- By the energy sector for heavy duty component bonding.
- For tool and mould making.
- For furniture making.
- For bonding metal to glass and/or ceramic.

[View This Product](#)

Important

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General Material Compatibility

- Metals (such as coated metal, steel, aluminium, copper, zinc alloys and ferrites)
- Plastics* (such as ABS, polystyrene, hard PVC, polycarbonate, Polyphenylene oxide and polyester moulding compounds)
- Fibre Composite Materials (including GRP, CRP and fibreglass)
- Wood and cellulose materials (e.g. MDF)
- Glass, Ceramics and Stone

*Please note Polyamide, PTFE and polyolefin may only be bonded after special treatment of the surface (e.g. low-pressure plasma, corona, flame impingement).

Properties

Basis	Methyl Methacrylate (MMA)
Colour After Curing	Yellowish, Transparent
Density of the Mixture	1 g/cm ³
Viscosity of the Mixture	4,500 MPa
Application Procedure	No Mix
Composition	Liquid
Handing Strength (35% of Final)	5 Minutes
Capable of Bearing Mechanical Loads (50% of Final)	8 Minutes
Processing Temperature	+10°C to +40°C
Curing Temperature	+18°C
Fully Cured (100%)	24 Hours
Adhesive Gap Bridging	0.4mm – 0.8mm
Temperature Resistance (After Curing)	-50°C to +130°C (+180° Short-Term)
IMPA Code	81 29 92
ISSA Code	75.629.53

Shear Strength (According to DIN 53281)

Aluminium	20 N/mm ²
Sand Blasted Steel	25 N/mm ²
Stainless Steel	30 N/mm ²
Polycarbonate	10 N/mm ²
PMMA	8 N/mm ²
ABS	6 N/mm ²
Hard PVC	11 N/mm ²
Fibreglass Reinforced Polyester	20 N/mm ²
Fibreglass Reinforced Epoxy	27 N/mm ²
Polyamide 6.6	3 N/mm ²

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RK-1500 Acrylic Adhesive 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)	+
Cylinder Oil	+	Propyl Alcohol	+
Dichloroethylene Ether	+	Selenium Chloride	+
Epichlorohydrin	+	Silicon Oils	+
Freon	O	Sulphur Dioxide (Wet & Dry)	+
Fuel (Jet or Turbine)	+	Sulphur Trioxide Gas	-
Glycocol, Glycine	+	Sulphuric Acid	O
Heating Oil (Diesel)	+	Sulphuric Acid (Fuming)	-
Heptane	+	Tannic Acid	O
Hydrochloric Acid	O	Toulene	O
Hydrocyanic Acid (Prussic Acid 5%)	+	Toulene Sulphuric Acid	O
Hydrogen Bromide (5%)	+	Trichloroethylene	+
Hydrogen Chloride	+	Turpentine, Turpentine Oil	+
Hydrogen Fluoride (Hydrofluoric Acid)	-	Waste Water	+
Hydrogen Peroxide	O	Water	+
Hydrogen Sulphide (Wet & Dry)	+	Water (Boiling)	O
Isobutyl Alcohol (Isobutene)	+	Water (Distilled)	+
		Xylene (Dimethylbenzoyl)	O

+ = Resistant

O = Resistant for a Limited Time

- = Not Resistant

Important

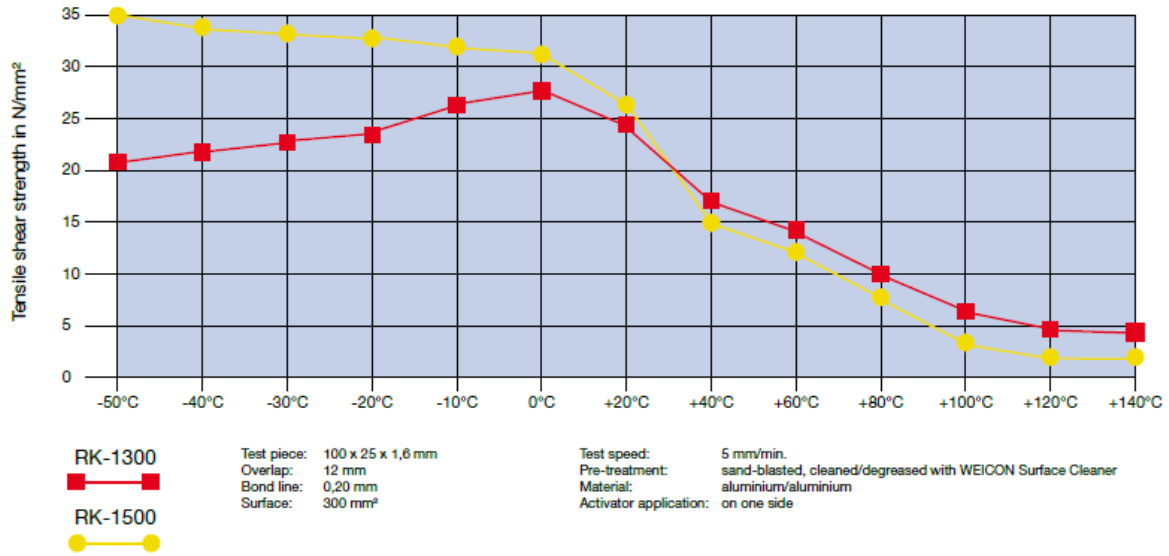
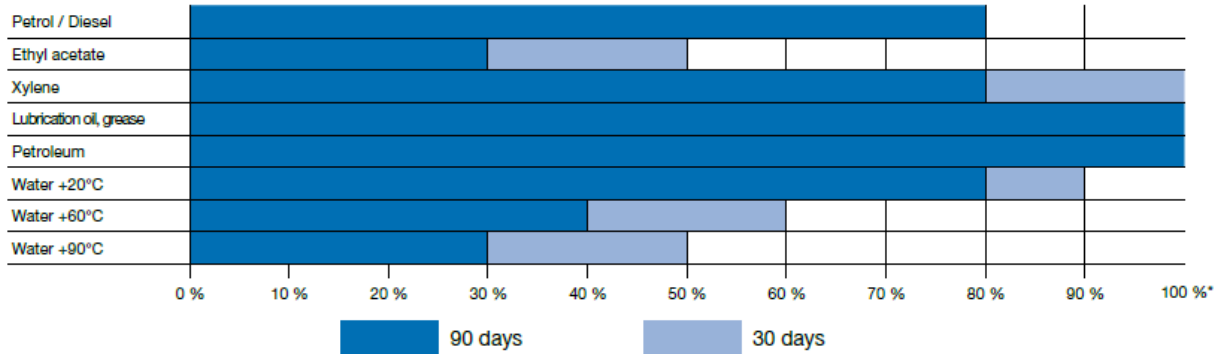
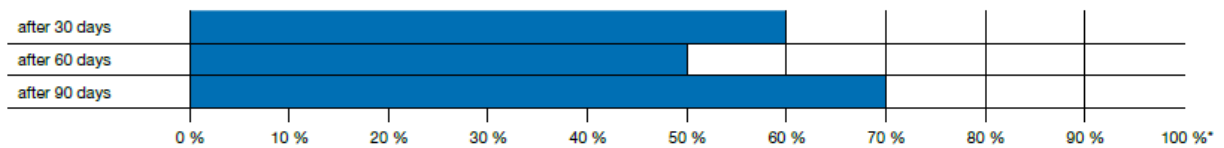
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Tensile shear strength according to DIN 53283 depending on the test temperature

Tensile shear strength in % after storage in different media

Tensile shear strength in % after storage in tropical climate in accordance with DIN 50015 (+40°C and 92% humidity)


* Average tensile strength after 7 days at +20°C and one-sided Activator application in accordance with the stability.

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Preparation of the Surface

To ensure perfect bonding, the surfaces to be joined must be clean and dry (to clean and degrease use Weicon Surface Cleaner). The highest strength values can be achieved through additional pre-treatment of the surfaces, such as roughening using blasting or abrasive agents. Several plastics, in particular polyamide, PTFE, polyolefin etc. can only be bonded after special surface treatment, for example using fluoridation, low-pressure plasma, corona, flame impingement etc.

Processing of the RK Activator

The RK Activator is applied, depending on the size of the bonding gap, on either one side or both sides of the surfaces to be bonded (brush, spray, dip). In case of bond lines with a max. of 0.4 mm in width, the Activator only needs to be applied on one side, for bond lines of up to a max. of 0.8 mm in width and/or rough, porous or passive surfaces (chrome, nickel etc) the Activator must be applied on both sides. For smooth plastic and metal surfaces, approx. 30 g/m² is necessary, for rough and porous surfaces up to 150 g/m² of Activator may be necessary. The evaporation time at room temperature (+20°C) is at least 5 minutes. A significant advantage to other adhesive systems is that the coated components can be stored up to 30 days at room temperature (+20°C) without losing effectiveness.

Processing of the RK Adhesive

The Adhesive is applied only on one side and normally on the surface which is not coated with Activator. The size of the bonding gap can be up to 0.80 mm (only if the Activator is applied on both sides). Bonding gaps of 0.15 mm to 0.25 mm in width always have the highest tensile shear strength.

The parts should be left separate for at least 5 minutes before they are joined.

Processing Temperature

The processing should take place at room temperature (approx. +20°C). Higher temperatures, e.g. +40°C shorten the positioning and curing times by approx. 30%, lower temperatures of approx. +10°C increase the respective times by approx. 50% and at down +5°C almost no reaction occurs anymore.

Storage

Weicon RK Construction Adhesives have a shelf life of at least 12 months if stored in a dry room at a constant temperature of approx. +20°C. At temperatures between +1°C and +7°C the shelf life can be extended up to 24 months. This applies for closed original units which have not been directly or indirectly exposed to sunlight. In case of storage temperatures exceeding +40°C and high humidity, the shelf-life is shortened to 6 months.

Availability

RK-1500 Liquid Acrylic Adhesive is available in a selection of sizes and configurations. Some are kits that include both adhesive and activator while others allow you to buy the two parts separately. These are listed below:

- 60gm Kit – Adhesive & Activator
- 330gm Cartridge – Adhesive Only
- 1kg Kit – Adhesive & 2 x 100gm Activator Spray
- 6kg Tin – Adhesive Only

The **Activator** is also available separately in 100gm Spray Bottles or 1 Litre Bottles

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