

Preliminary
LOXEAL AC5004**Description**

Loxéal AC5004 is a 2-part, toughened acrylic adhesive. Crystal clear appearance, it cures quickly at room temperature.

It creates joints with high shear, peel and impact strength and high chemical resistance

Its toughening makes it ideal for bonding dissimilar materials including metals (scratching aluminium surfaces is not required), plastics, composites, ceramic, glass and wood. It is designed to ensure transparent joints.

Loxéal AC5004 is also highly resistant to temperature and thermal shocks.

It is provided in an easy-to-dispense cartridge with mixing nozzle or it can be used bead on bead without the mixing nozzle.

Physical properties

Part:	A	B
Composition:	Methyl Methacrylate	Methyl Methacrylate
Colour:	Transparent	Transparent
Viscosity (+25°C - Pa s):	80-120	8-12
Specific weight (g/ml):	1,1	1,0
Mixing ratio vol.:	1:1	
Maximum gap fill:	3 mm	
Shelf life:	1 year in unopened packaging at +2°C/+7°C	

Curing properties at +25°C (typical)

Usable/Pot life:	1 minutes**
Fixture / handling time:	8 minutes
Functional cure time:	25 minutes
Full cure time:	24 hours
Peeling strength (ISO 4578):	40-50 N/25mm
Hardness Shore D:	50-60
Shear strength (at +25°C on steel ISO 4587):	20 N/mm ²
Temperature range:	-40°C / +120°C

**Time detected on a 2g total mass mixture A+B

Adhesion to different substrates – Shear strength:

Aluminium	18 N/mm ²
Carbon fibre	22 N/mm ²
Epoxy FRP	12 N/mm ²
PVC	5 N/mm ²
PC	2 N/mm ²
PMMA	4 N/mm ²
Glass/Glass	7 N/mm ²
Glass/Aluminium	13 N/mm ²
Glass/Steel	14 N/mm ²

Additional information

This product is not recommended for use in contact with strong oxidizing materials. This product may affect some thermoplastics and users must check compatibility of the product with such substrates.

Directions for use**1. Surfaces preparation**

For best results, with some metals such as aluminium, copper and its alloys we recommend to scratch the surfaces with a tool and then to degrease and clean with Loxéal Cleaner 10 or Acetone and let dry for a few seconds.

2. Mixing

The resin and the hardener need to be mechanically mixed before use in the ratio of weight and/or volume in compliance with technical specifications until a homogeneous colour is reached.

Products are available in dual cartridges with static mixers allowing a direct and correct product application on the substrates to bond, completely discarding the first 3/5 cm of the extruded product.

If no mixing nozzle is being used, make sure one component is extruded on top of each other (not side by side). Alternatively apply a thin layer of resin on one component and hardener on the other.

3. Pot life

Pot life of the mixed product may vary from few minutes to some hours at room temperature according to the resin and the hardener used. Higher temperature reduces the pot life. Apply product at temperature higher than +15°C.

4. Assembly

Parts to be bonded shall be assembled immediately after product application and kept close until functional cure. We recommend not providing any mechanical stress during that time which can vary according to joint shape and substrates.

5. Cleaning

Excess of product can be removed with Acetone or any other solvent based cleaner compatible with the substrates to bond. Application tools and dosing systems shall be cleaned before the product is hardened. Cured product can be removed only mechanically.

Storage

We suggest to keep product in a refrigerated room at a temperature range from +2°C to +7°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxeal Technical Service

Safety and handling

Consult Material Safety Data Sheet before use

Note

The data contained herein, obtained in Loxeal laboratories, are given for information only; if specifics are required, please contact Loxeal Technical Department. Loxeal ensures abiding quality of supplied products according to its own specifics. Loxeal cannot assume responsibility for the results obtained by others which substrates' material and methods are not under Loxeal control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Loxeal disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loxeal products. Loxeal specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.