



AL 6055

Technical Datasheet

AL 6055 is a two component methyl methacrylate adhesive.

It is especially suited for bonding metals to different plastics (e.g. ABS, PC, PVC, PMMA, Polyamide) and composites.

AL 6055 has a short open time.

Physical properties - Liquid state

Base compound	Methyl methacrylate
Shelf life	12 months
Density	A / B: 1,07 g/cm ³
Mixing ratio	1:1
Open time	40 - 60 s
Fixture time	3 - 6 min
Flashpoint	10 °C
Color component A	Pink
Color component B	Green

Viscosity

Cone / plate, measured at 20 °C	
@ 0.5 s ⁻¹	25.000 - 45.000 mPas

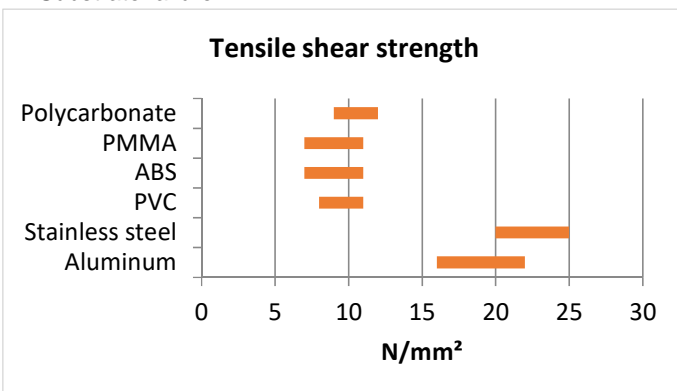
Physical properties - Polymer

Full cure in hours	24
Temperature range	-50 - 120 °C
Elongation at break	30 - 50 %
E-modulus	600 - 800 MPa
Tensile strength	15 - 20 MPa

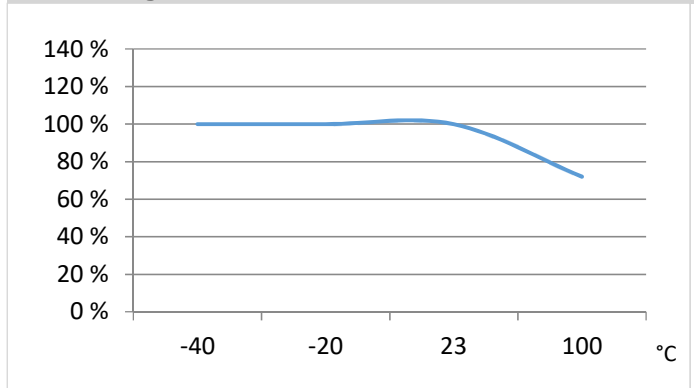
Adhesive performance Tensile shear strength

Substrate	N/mm ²	
Polycarbonate ▲	9	12
PMMA ▲	7	11
ABS ▲	7	11
PVC ▲	8	11
Stainless steel	20	25
Aluminum	16	22

▲ Substrate failure



Hot strength tested at temperature



Resistance against solvents

Solvent	Example	Resistance
Weak acids		+++
Weak bases		+++
Polar solvents		-
Strong acids and bases		-

+++ very good - limited

General Information about MMA adhesives

2-component methacrylate adhesives belong to the group of reactive adhesives. The reaction starts by mixing hardener and resin. Cyberbond offers these adhesives in double cartridges in 1:1 or 10:1 ratio with static mixing tubes. This allows an easy and quick application. Methacrylate adhesives are available in different viscosities from liquid to paste-like and with different curing times. They are characterized by excellent adhesion to metals, many plastics and composite materials. The mechanical properties range from flexible to rigid.

Measurement of Viscosity

Viscosity describes the flow-ability of a liquid. Cyberbond measures the viscosity of the products by means of the cone/plate method: the liquid is applied on a panel and a defined cone presses the liquid together and rotates. Newtonian fluids are measured at shear rate 160 s⁻¹, thixotropic products are measured at shear rate 0,5 s⁻¹ and 160 s⁻¹.

The viscosity is measured in mPa*s at 20 °C.

Clean Surface

Surfaces should be clean, dry and free of grease before bonding.

Storage

Store products in a cold and dark place at temperatures between 10 °C to 20 °C.

Safety Information for MMA adhesives

Please consult the SDS (Safety Data Sheet) before using. Keep the workplace clean and use in well ventilated areas only. Install suitable exhaust system at the workplace. Wear suitable safety glasses and gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

The data mentioned in this TDS, particularly the recommendations and use of products are based on our recent knowledge and experience. Due to the fact of having so many different materials involved and conditions of applications which are out of our influence, we strongly recommend to do sufficient tests in order to guarantee that Cyberbond products are suitable for the intended process and applications. Except for wilful acts any liability based on such recommendations or any verbal advice is hereby expressly excluded.

For safe handling consult Material Safety Data Sheet (MSDS).

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The logo for Cyberbond CB, consisting of the text 'Cyberbond CB' in white, bold, sans-serif font, set against a blue rectangular background with a yellow triangle at the top right corner.