

AFINITICA® BEMO64+

PRODUCT DESCRIPTION

Technology	Cyanoacrylate
Chemical Type	Methoxyethyl Cyanoacrylate
Appearance (uncured)	Whitish cloudy gel
Components	One part - requires no mixing
Viscosity	High
Cure	Humidity

AFINITICA® BeMo64+ is an odour free instant adhesive derived from a patented formula. It is a gel based product suitable for working on surfaces oriented in any direction, horizontal, inclined, vertical, or overhead, as it will not run or sag. It is a non-irritant, non-staining product that is whitish before cure and practically transparent after curing. AFINITICA® BeMo64+ is specially designed to be used in applications where high temperature and humidity resistance is required. The resulting polymer is flexible.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific gravity, 25 °C, g/cm ³ :	1.12
Viscosity, Brookfield, 25 °C, mPa·s (cP):	
Spindle 14, speed 10 rpm	17,000 – 50,000

TYPICAL CURING PERFORMANCE

When cured, the product is a flexible and almost transparent polymer. Under normal conditions, the atmospheric moisture initiates the curing process. Although full functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical resistance is developed.

FIXTURE TIMES

Fixture time is the time at which an adhesive bond (250 mm²) is capable of supporting a 3 kg load for 10 seconds. The fixture time will depend on the substrate. The table below shows the fixture time for different substrates using lap shears.

	Time (s)
Pine Wood	60 – 90
Beech Wood	30 – 50
ABS	50 – 75
Polycarbonate	150 - 170
Aluminium A5754	25 – 40
Mild steel	35 – 45

TYPICAL PERFORMANCE OF CURED MATERIAL

TENSILE SHEAR STRENGTH

The shear strength will depend on the substrate. The Table below shows the shear strength for different substrates using lap shears according to ISO 4587.

Cured for 24h at 22 °C

	Strength (N/mm ²)
Pine Wood	10 - 12
Beech Wood	12 - 14
Oak Wood	9 - 11
PVC	5 - 8
ABS	9 - 10*
Polycarbonate	5 - 7
Aluminium A5754	11 - 13
Aluminium 6060	13 - 15
Mild steel	17 - 22
GBMS	12 - 17

*Substrate failure

The product is not suitable for bonding polyethylene (PE), polypropylene (PP) or polytetrafluoroethylene (PTFE). Higher bonding times may be required for highly crystalline plastics.

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 24h at 22 °C on Mild Steel

Lap Shear Strength, ISO 4587

HEAT AGING

Aged at temperature indicated and tested at 22 °C

	Strength (N/mm ²)
24h at 22 °C	17 - 22
3 days at 125 °C	6 - 10
3 days at 150 °C	7 - 12
Water immersion 3 days at 60 °C	5 - 7

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS): 242977

Directions for use:

- 1) Before applying the glue, make sure the gluing surface is clean, dry and free of grease.
- 2) Apply adhesive to one of the surfaces. Do not use items like tissue or a brush to spread the adhesive.
- 3) Assemble the parts within a few seconds. The parts should be accurately located, as the short fixture time leaves little opportunity for adjustment.
- 4) Bonds should be held fixed or clamped until adhesive has fixture.
- 5) Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).
- 6) Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °C can adversely affect product properties
- 7) Product shelf-life: 12 months

Conversions:

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{in}$$

$$\mu\text{m} / 25.4 = \text{mil}$$

$$\text{N} \times 0.225 = \text{lb}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{N/mm}^2 \times 145 = \text{psi}$$

$$\text{MPa} \times 145 = \text{psi}$$

$$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$$

$$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$$

$$\text{mPa}\cdot\text{s} = \text{cP}$$

NOTE

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