AFINITICA® BEMO59

PRODUCT DESCRIPTION

Technology	Cyanoacrylate
Chemical Type	Methoxyethyl Cyanoacrylate
Appearance (uncured)	Transparent, colourless to light yellow, cloudy gel
Components	One part – requires no mixing
Viscosity	High
Cure	Humidity

AFINITICA® BEMO59 is an odour free instant adhesive. 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 a colourless cloudy gel before cure and practically transparent after curing. The resulting polymer is flexible.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific gravity, 25 ºC, g/cm^3: 1.14
Viscosity, Brookfield, 25 ºC, mPa·s (cP):
Spindle 14, speed 10 rpm 20,000 – 40,000

TYPICAL CURING PERFORMANCE

When cured, the product is a flexible and 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 mm^2) is capable of supporting a 3 kg load for 10 seconds. The fixture time will depend on the substrate. The following table shows the fixture time for different substrates using lap shears.

	Time (seconds)
Pine Wood	> 300
Beech Wood	200 - 400
ABS	70 – 120
Polycarbonate	120 – 180
Aluminium A5754	80 – 120
Mild Steel	50 - 100

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 ºC

	Strength (N/mm^2)
Pine Wood	9 – 11*
Beech Wood	12 – 15*
ABS	12 – 13*
Polycarbonate	7 – 8
Aluminium A5754	2 – 4
Mild steel	14– 17

* Substrate Failure

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): 242936

Directions for use:

1) Before applying the glue, make sure the gluing surface is clean, dry and free of grease.
2) For metal tube products, remove cap and squeeze tube gently with minimum pressure from the end to dispense product. For plastic tube twist cap anticlockwise and squeeze tube gently from one end to dispense.
3) Dispense as little material of gel as possible – the thinner the layer of adhesive, the faster and stronger the bond.
4) After dispensing, close tubes by replacing cap or twisting cap on plastic tube clockwise
5) Assemble parts and press firmly together. Handling strength is achieved after 5-10 minutes.
6) 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).
7) Optimal storage: 2 ºC to 8 ºC. Storage below 2 ºC or greater than 8 ºC can adversely affect product properties.
8) Product shelf-life: 12 months

AFINITICA Technologies S.L.
Edifici Eureka, Campus UAB
08193 Bellaterra (Barcelona) Spain

+34 931 431 952
info@afinitica.com
www.afinitica.com

Conversions:

(ºC x 1.8) + 32 = ºF
kV/mm x 25.4 = V/mil
mm / 25.4 = in
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm^2 x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·mm x 0.142 = oz·in
mPa·s = cP

NOTE

The data contained herein are furnished for information only and are believed to be reliable. AFINITICA cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, AFINITICA Technologies s.l. specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of AFINITCA's products. AFINITICA specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits. The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any AFINITICA Technologies patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.