AFINITICA® ADHESIVE WELDING ULTRA

PRODUCT DESCRIPTION

Technology	Cyanoacrylate
Chemical Type	Ethyl Cyanoacrylate
Appearance (uncured comp. A)	Transparent gel
Appearance (uncured comp. B)	Transparent gel
Appearance of Mix	Transparent gel
Components	Two-part – requires mixing
Viscosity	High, thixotropic gel
Cure	By mixing

AFINITICA® Adhesive Welding Ultra is a gap filling instant adhesive with excellent bonding properties to a very broad range of materials and surfaces. This bi-component formulation offers high adhesion with a curing time of only 5 minutes, working times (in-mixer) up to 7 minutes. It gives instant adhesion to plastics, wood and metals (including aluminium) and to porous and irregular surfaces.. The gel consistency facilitates working in any orientation whilst the static mixing nozzle ensures uniformity and precise application for exceptional user convenience.

TYPICAL PROPERTIES OF UNCURED MATERIAL

PART A:
Specific gravity, 25 ℃, g/cm^3:   1.1
Viscosity, Brookfield, 25 ℃, mPa·s (cP):
Spindle 14, speed 1.5 rpm   100,000 - 190,000
Viscosity, 25 °C, mPa·s (cP):
       Spindle 14, speed 10 rpm: 25,000 – 40,000

PART B:
Specific gravity, 25 ℃, g/cm^3:   1.16
Viscosity, Brookfield, 25 ℃, mPa·s (cP):
Spindle 14, speed 1.5 rpm   40,000 - 70,000
Viscosity, 25 °C, mPa·s (cP):
Spindle 14, speed 10 rpm   15,000 – 30,000

MIXED A and B:
Open time at 25 ℃:   5 – 7 minutes
Working time at 25 ℃ (in the statix mixer):
                6 - 7 minutes

TYPICAL CURING PERFORMANCE

Curing is initiated by mixing the Part A and Part B components. Handling strength is achieved rapidly; full strength is achieved within 24 hours.

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 table below shows the fixture time for different substrates using lap shears.

	Time (s)
Pine Wood	45 – 120
Beech Wood	15 – 100
ABS	35 – 60
Polycarbonate	45 – 90
Aluminium A5754	15 – 90
Mild steel	10 – 60

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 ℃

	Strength (N/mm²)
Pine Wood	6 – 9*
Beech Wood	14 – 16*
ABS	11 – 13*
Polycarbonate	9 – 11*
Aluminium A5754	4 – 7
Mild steel	13 – 15

* Substrate Failure

TYPICAL ENVIRONMENTAL RESISTANCE

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): Part A SDS242981 and part B SDS242982.

Directions for use:

1) Before applying the glue, make sure the gluing surface is clean, dry and free of grease.

2) To assemble the syringe, first introduce the plunger, then exchange the cap with a mixer. Discard the first few drops.

3) Apply the material on one of the two surfaces and assemble the two parts within 15 minutes.

4) After uniting the substrates, 15-30 seconds are available for repositioning depending on the substrate. Press the two parts together firmly for around 30 seconds. After releasing the pressure, wait 10 minutes before good handling strength and 24h for full strength.

5) Make use of the syringe or discard product at least every 30 minutes to avoid the product from polymerizing inside the mixer, if you do not want to replace the mixer.

6) After use, discard the mixer and replace the cap. Store the syringe in a cool and dry environment.

7) Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °C can adversely affect product properties

8) Product shelf-life: 12 months

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

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