

AFINITICA® AF06

**PRODUCT DESCRIPTION**

<b>Technology</b>	Cyanoacrylate
Chemical Type	Ethyl Cyanoacrylate
Appearance (uncured)	Transparent, colourless to straw coloured liquid
Components	One part – requires no mixing
Viscosity	Low
<b>Cure</b>	Humidity

AFINITICA® AF06 is designed for the assembly of difficult-to-bond materials which require uniform stress distribution and strong tension and shear strength. The product has excellent bonding properties to a very broad range of materials, including metals, plastics and elastomers. AFINITICA® AF06 is particularly suited for bonding porous or absorbent materials such as wood, paper, leather and fabric.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Specific gravity, 25 °C, g/cm <sup>3</sup> :	1.1
Viscosity, Brookfield, 25 °C, mPa·s (cP): Spindle 21, speed 10 rpm	900 – 1200

**TYPICAL CURING PERFORMANCE**

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<sup>2</sup>) 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)
<b>Pine Wood</b>	10 – 20
<b>Beech Wood</b>	10 – 20
<b>ABS</b>	10 – 15
<b>Polycarbonate</b>	10 – 15
<b>Aluminium A5754</b>	5 – 10
<b>Mild steel</b>	5 – 10

**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 <sup>2</sup> )
<b>Pine Wood</b>	10 – 12*
<b>Beech Wood</b>	14 – 18*
<b>ABS</b>	12 – 13*
<b>Polycarbonate</b>	8 – 11
<b>Aluminium A5754</b>	2 – 4
<b>Mild steel</b>	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): 242926

**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:**
 $(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$ 
 $\text{kV/mm} \times 25.4 = \text{V/mil}$ 
 $\text{mm} / 25.4 = \text{in}$

$\mu\text{m} / 25.4 = \text{mil}$   
 $\text{N} \times 0.225 = \text{lb}$   
 $\text{N}/\text{mm} \times 5.71 = \text{lb}/\text{in}$   
 $\text{N}/\text{mm}^2 \times 145 = \text{psi}$   
 $\text{MPa} \times 145 = \text{psi}$   
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$   
 $\text{mPa}\cdot\text{s} = \text{cP}$

**NOTE**

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