AFINITICA® FURY

PRODUCT DESCRIPTION

Technology	Cyanoacrylate
Chemical Type	Methoxyethyl Cyanoacrylate
Appearance (uncured)	Transparent, slightly coloured liquid
Components	One part – requires no mixing
Viscosity	Medium
Cure	Humidity

AFINITICA® FURY is designed to resist high temperatures up to 175ºC - 150ºC in long periods of time. The product is slightly slower than usual cyanoacrylate based instant adhesives but it has nice bonding properties to a very broad range of materials, including metals, plastics and woods. AFINITICA® FURY is capable to resist high temperatures with no need of previous mixtures, so it is a single part product. Even more, AFINITICA® FURY gets even a stronger bond when submitted to highest temperatures for long times.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific gravity, 25 ºC, g/cm^3: 1.1 –1.2

Viscosity, Brookfield, 25 ºC, mPa·s (cP):

Spindle 21, speed 21 rpm 350 – 500

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^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	20 – 50
Beech Wood	15 – 40
ABS	10 – 40
Polycarbonate	30 – 70
Stainless steel A316	10 – 20
Mild steel	10 – 25

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	5 – 7
Beech Wood	7 – 9
ABS	9 – 12*
Polycarbonate	5 – 8*
Stainless steel A316	5 – 9
Mild steel	10 – 14
Grit Blasted Mild Steel	10 – 12

* Substrate Failure

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week at 22 ºC
Lap Shear Strength, ISO 4587

HEAT AGING

Aged at temperature indicated and tested at 22 ºC

Heat Aging at 125ºC

	Strength (N/mm^2)
	Grit Blasted Mild Steel
Initial Strength	10 – 12
After 1 day @ 125ºC	6 – 9
After 2 days @ 125ºC	5 – 8
After 3 days @ 125ºC	6 – 9

Heat Aging at 150ºC

	Strength (N/mm^2)
	Grit Blasted Mild Steel
Initial Strength	10 – 12
After 1 day @ 150ºC	9 – 11
After 2 days @ 150ºC	10 – 12
After 3 days @ 150ºC	12 – 14

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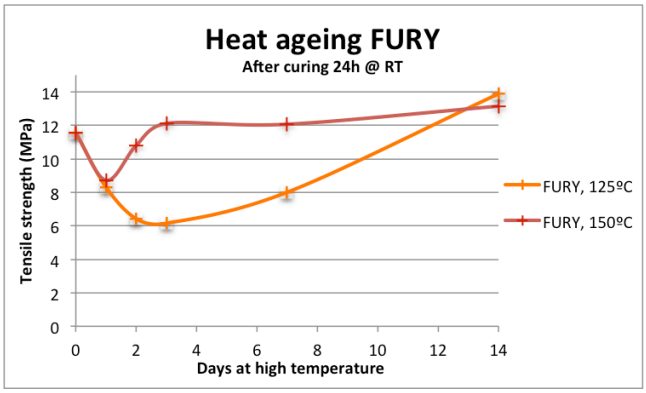

GENERAL INFORMATION

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): SDS 242957

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) Do not expose the product to high temperatures until it is totally cured.
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

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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