FINIXA
paint processing products

TDS

TECHNICAL DATA SHEET

TECHNICAL DATA SHEET
IAG 20 - Finixa instant adhesive gel - 20gr

PRODUCT DESCRIPTION

Technology	Cyanoacrylate
Chemical Type	Ethyl cyanoacrylate
Appearance (uncured)	Transparent clear liquid
Components	One part - requires no mixing
Viscosity	High
Cure	Humidity
Application	Bonding
Key Substrates	Plastics, Rubbers and Metals

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.05
Viscosity, Cone & Plate, mPa·s (cP):	
Temperature: 25 °C, Shear Rate: 100 s-1	900 to 1,500LMS
Viscosity, Brookfield - LVF, 25 °C, mPa·s (cP):	
Spindle 2, speed 12 rpm	1,150 to 1,500
Vapour Pressure, hPa	<1
Flash Point - See SDS	

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/solvent resistance is developed.

Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The table below shows the fixture time achieved on different materials at 22 °C / 50 % relative humidity. This is defined as the time to develop a shear strength of 0.1 N/mm

Fixture Time, seconds:	
Mild Steel (degreased)	20 to 50
Aluminum	10 to 30
Zinc dichromate	40 to 100
Neoprene	<5
Rubber, nitrile	<5
ABS	15 to 40
PVC	20 to 50
Polycarbonate	30 to 70
Phenolic	10 to 40

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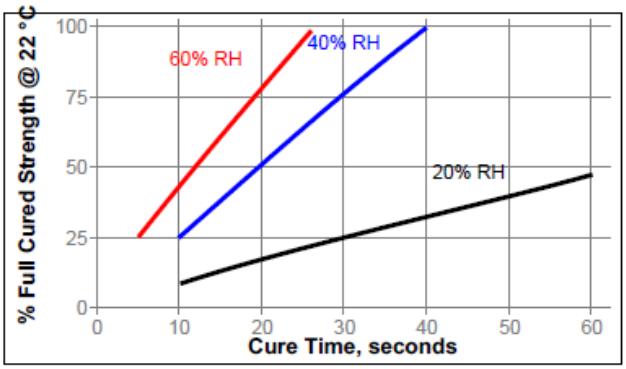
Cure Speed vs. Bond Gap
The rate of cure will depend on the bondline gap. Thin bond lines result in high cure speeds, increasing the bond gap will decrease the rate of cure.

Cure Speed vs. Humidity
The rate of cure will depend on the ambient relative humidity.
The following graph shows the tensile strength developed with time on Buna N rubber at different levels of humidity.



Cure Speed vs. Activator
Where cure speed is unacceptably long due to large gaps, applying activator to the surface will improve cure speed. However, this can reduce ultimate strength of the bond and therefore testing is recommended to confirm effect.

TYPICAL PROPERTIES OF CURED MATERIAL
After 24 hours @ 22 °C
Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}	100×10^{-6}
Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)	0.1
Softening Point, DIN EN 1427, °C	165

Electrical Properties:

Dielectric Constant / Dissipation Factor, IEC 60250:

0.1-kHz	2 to 3.3 / <0.02
1-kHz	2 to 3.5 / <0.02
10-kHz	2 to 3.5 / <0.02
Volume Resistivity, IEC 60093, Ω·cm	2×10^{15} to 10×10^{15}
Surface Resistivity, IEC 60093, Ω	10×10^{15} to 80×10^{15}
Dielectric Breakdown Strength, IEC 60243-1, kV/mm	25

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TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 24 hours @ 22 °C
Lap Shear Strength, ISO 4587:

Steel (grit blasted)	N/mm² 18 to 26 (psi) (2,610 to 3,770)
Aluminum (etched) N/mm²	12 to 19 (psi) (1,740 to 2,755)
Zinc dichromate	N/mm² 6 to 13 (psi) (870 to 1,885)
ABS N/mm²	6 to 20 (psi) (870 to 2,900)
PVC N/mm²	6 to 20 (psi) (870 to 2,900)
Polycarbonate N/mm²	5 to 20 (psi) (725 to 2,900)
Phenolic N/mm²	5 to 15 (psi) (725 to 2,175)
Neoprene N/mm²	5 to 15 (psi) (725 to 2,175)
Nitrile N/mm²	5 to 15 (psi) (725 to 2,175)

Tensile Strength, ISO 6922:

Steel	N/mm² 12 to 25 (psi) (1,740 to 3,625)
Buna-N N/mm² 5 to 15	(psi) (725 to 2,175)

"T" Peel Strength, ISO 11339:

Steel (degreased)	N/mm <0.5 (lb/in) (<2.8)

After 10 seconds @ 22 °C
Tensile Strength, ISO 6922:

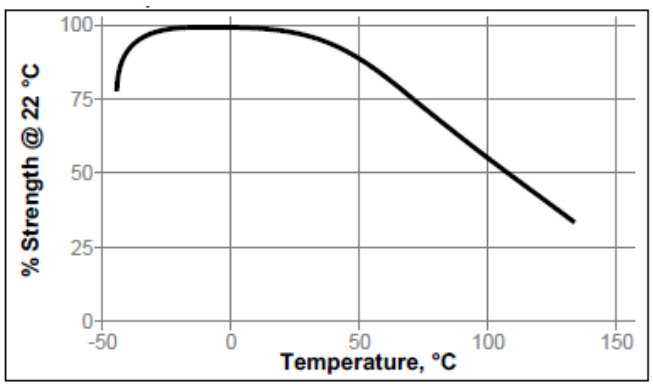
Buna-N	N/mm² ≥6.0LMS (psi) (≥870)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 22 °C
Lap Shear Strength, ISO 4587:
Mild Steel (grit blasted)

Hot Strength

Tested at temperature



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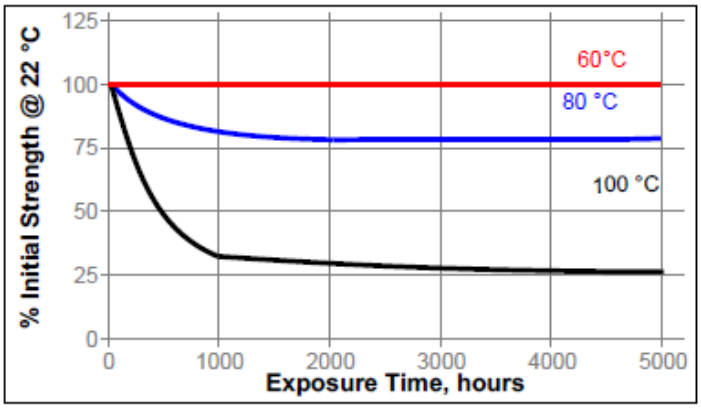
Heat Aging
Aged at temperature indicated and tested @ 22 °C



Chemical/Solvent Resistance
Aged under conditions indicated and tested @ 22 °C.

		% of initial strength		
Environment	**°C**	**100 h**	**500 h**	**1000 h**
Motor oil (MIL-L-46152)	40	100	100	95
Gasoline	22	100	100	100
Isopropanol	22	100	100	100
Ethanol	22	100	100	100
Freon TA	22	100	100	100
1,1,1 Trichloroethane	22	100	100	100
Heat/humidity 95% RH	40	80	75	65
Heat/humidity 95% RH on polycarbonate	40	100	100	100

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).

Directions for use:
1. For best performance bond surfaces should be clean and free from grease.
2. This product performs best in thin bond gaps (0.05 mm).
3. Excess adhesive can be dissolved with cleanup solvents, nitromethane or acetone.

Storage
Store product in the unopened container in a dry location.
Storage information may be indicated on the product container labeling.
Shelf life: 1,5 years

Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °C can adversely affect product properties.
Material removed from containers may be contaminated during use. Do not return product to the original container.

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Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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