

# Cyberbond

**Apollo  
2003**

TECHNICAL DATA SHEET



Apollo 2003 is a single component low viscosity cyanoacrylate adhesive, suitable for general-purpose applications on metals rubbers and plastics. Apollo 2003 is approved to ISO 10993-5 for biocompatibility, making it suitable for use in medical device applications.

## Physical Properties - Monomer (Uncured)

Base Compound	Ethyl
Appearance	Clear
<b>Viscosity</b>	<b>50 +/- 20 cPs</b>
Specific Gravity	1.06 g/cc
Flash Point	85°C/ 185°F
Shelf Life	12 mo
Storage Condition	20°C/ 68°F
RoHS-Compliant	yes

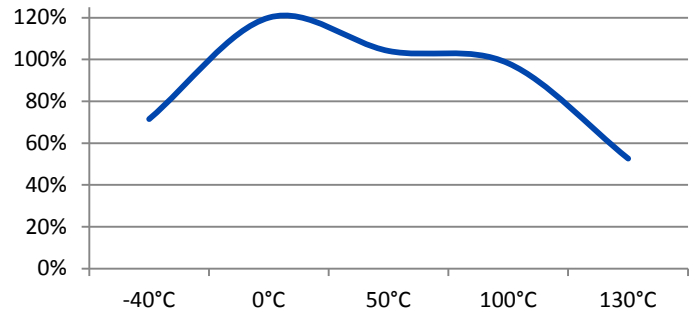
## Physical Properties - Polymer (Cured)

Full Cure Time	24 hours
Appearance	Clear
Service Temp Range	-55 to 95 °C ( -67 to 203 °F)

## Specifications and Approvals

10993-5  
Mil-A-46050C, Type II Class I, A-A-3097, Type II Class 1

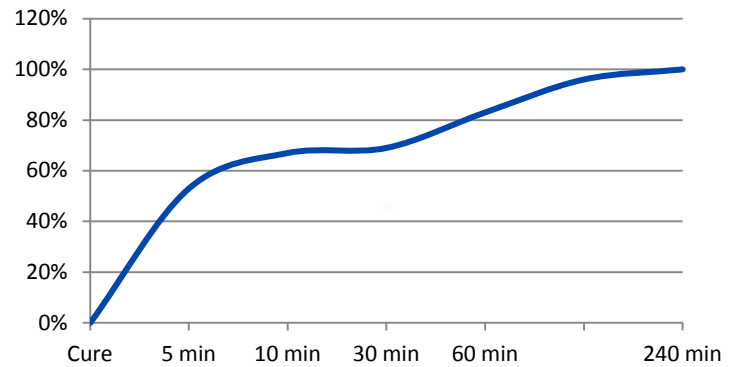
## Hot Strength (%RT strength, tested at temperature)



## Setting Time

Steel	10 to 50	seconds
ABS	5 to 7	seconds
EPDM	4 to 10	seconds

## Time Until Full Cure (% of RT strength)



## Performance of Cured Adhesive

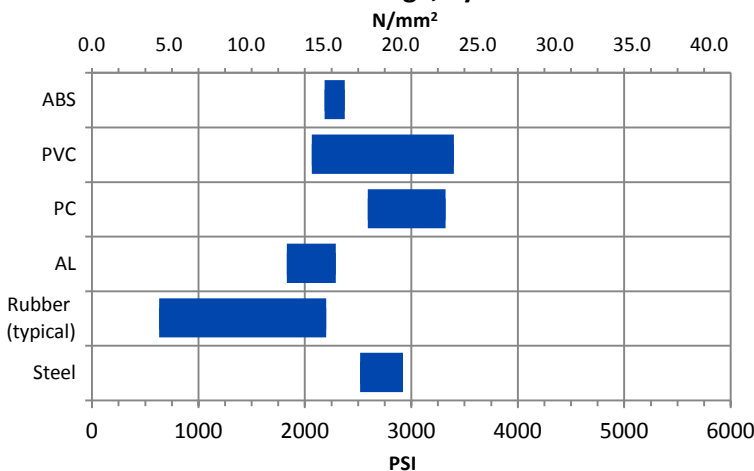
Substrate	N/mm <sup>2</sup>	PSI
Steel	17.4 to 20.1	2520 to 2920
Rubber*	4.3 to 15.2	630 to 2200
AL	12.6 to 15.8	1830 to 2290
PC**	17.9 to 22.9	2590 to 3320
PVC**	14.2 to 23.4	2065 to 3400
ABS**	15.1 to 16.4	2185 to 2375

\*Rubber figures given are typical. Your results may vary by specific rubber type.

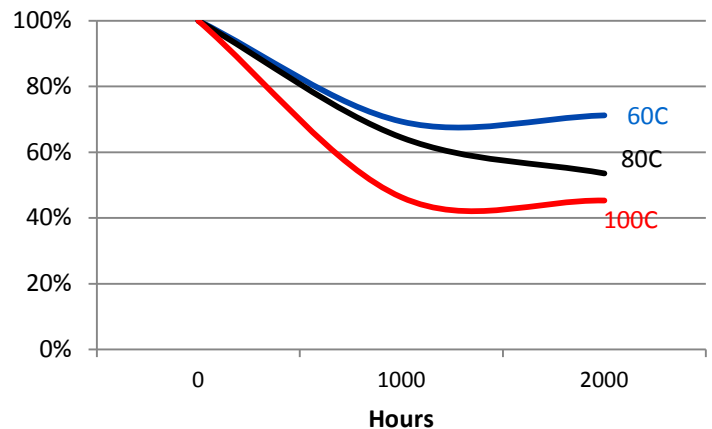
\*\*Tested to ASTM 4501

\*\*\*n/r = not recommended

## Performance Range, by Substrate



## Heat Aging (aged at temp indicated and tested @ 22°C)



## Solvent Resistance

Solvent	Example	Resistance
Alcohol	Ethanol, Methanol	+++
Ester (aromatic)	Ethylacetate	---
Ketone (aromatic)	Acetone, Benzophenone	---
Aliphatic hydrocarbon (alkanes)	Petrol, Heptanes, Hexane	++-
Aromatic hydrocarbons	Benzyl, Toluol, Xylol	++-
Halogenated hydrocarbons	Methylenchloride, Chloroform, Chlorobenzol	---
Weak aqueous acid	Nitrite, muriatic acid, sulphuric acid, phosphoric acid	+++ (--- if concentrated)
Weak aqueous base	sodium hydroxide solution, caustic potash	+++ (--- if concentrated)

## General Instructions

Surfaces to be bonded should be clean and dry. Dispense a drop or drops to one surface only. Apply only enough to leave a thin film layer after compression. Press parts together and hold firmly for a few seconds. Good contact is essential. An adequate bond develops in less than one minute and maximum strength is attained in 24 hours. Wipe off excess adhesive from the top of the container and recap. Apollo products if left uncapped may deteriorate by contamination from moisture in the air. Because Apollo products cure by polymerization, whitening may appear on the surface of the container or the bonded materials. This will not affect adhesive performance.

## Curing Performance

Ambient surface moisture initiates the curing process. Handling strength is reached in a short time, and will vary based on environmental conditions, bond line gap, and other factors. Product will continue to cure for at least 24 hours before full strength and solvent resistance is developed.

## Storage

Products should be stored unopened in a cool, dry place out of direct sunlight. Products should be kept at room temperature away from direct light. Protect from extreme heat or cold, do not refrigerate.

Updated

1/20/2012

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PLASTICS

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Curbell Plastics is a proud supplier of Cyberbond materials.

## Note

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**For safe handling information on this product, consult the Material Safety Data Sheet (MSDS)**

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