401 N. Raddant Rd.
Batavia, IL 60510
ph: 630-761-8900
fx: 630-761-8989

www.cyberbond1.com

Technical Data Sheet
Apollo 2241

Product Description

Apollo 2241 is a black, high viscosity, rubber-toughened ethyl cyanoacrylate adhesive. Provides superior shock and thermal resistance when bonding rubbers, metals, and plastics in harsh environments.

Physical Properties

Monomer (Liquid)

Base Compound	Ethyl Cyanoacrylate
Appearance	Black Liquid
Viscosity (cP @ 68°F)	2400 cP
Specific Gravity (g/cc)	1.06
Flash Point (TCC)	185°F
Shelf Life @ 60°F	6 months unopened

Military Specifications

Mil-A-46050C
Type II, Class 3

Curing Properties

Ambient surface moisture will initiate the hardening process. Handling strength is reached in a short period of time and varies depending on environmental conditions and substrates being bonded. Product will continue to cure for at least 24 hours before full strength and resistances are developed.

Setting Time (68°F, 65% R.H.)

Steel	40 to 70 seconds
Aluminum	30 to 60 seconds
Neoprene	25 to 50 seconds
ABS	30 to 60 seconds
Polycarbonate	50 to 90 seconds
PVC	25 to 50 seconds

Curing Performance

The gap of the bond line will affect set speed. Smaller gaps tend to increase the speed. Activators can be applied to improve set speed but may also impair overall adhesive performance.

Polymer (Cured)

Appearance	Black Solid
Service Temperature Range	-65°F to 250°F
Softening Point	329°F
Refractive Index (ND 20)	1.49
Full Cure Time	24 Hours
Dielectric Strength (KV/mm)	11.6
Dielectric Constant (@ 1Kc)	5.4
COE (in./in./F)	.000126
Tensile Strength (steel/steel)	3700 psi
Solubility	Nitromethane, Acetone, Dimethylformamide

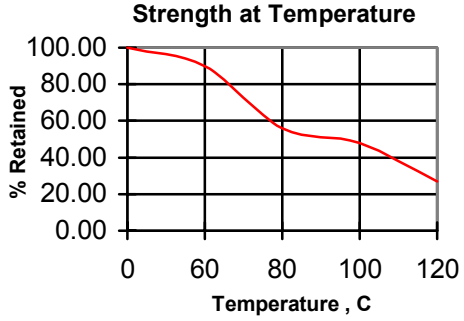
Performance of Cured Materials

Tensile Shear strength after 48 hours at 20° to 25°C

Substrate	Range in N/mm2
Blasted Steel	20 to 28
Etched Aluminum	14 to 23
Neoprene	> 10
ABS	> 6
Polycarbonate	> 5
PVC	> 6

Temperature Resistance

Sheer Strength on steel after 1 week at 22 °C



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Chemical Resistance

Sheer strength on steel after 12 month soak

Solvent	% Strength Retained
Motor Oil	100
Gasoline	100
Tricloroethane	100
Freon TA	100
10% NaOH	0
10% Hcl	0
Water	0

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 that 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. If this happens, wipe surfaces well with acetone.

Storage

Products should be stored unopened in a cool, dry place out of direct sunlight.

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

NOTE

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Rudolph Bros. & Co.
PO Box 425, Canal Winchester, OH 43110
Phone: 614-833-0707
Fax: 800-600-9508
e-mail: rbcsupport@rudbro.com
www.rudbro.com