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Technical Data Sheet

Apollo 2014

Product Description

Apollo 2014 is a single component, viscosity cyanoacrylate adhesive. Ideal for rubber bonding and filling small gaps.

Physical Properties

Monomer (Liquid)

| | |
|-------------------------|---------------------|
| Base Compound | Ethyl Cyanoacrylate |
| Appearance | Colorless Liquid |
| Viscosity (cP @ 68°F) | 40 cP |
| Specific Gravity (g/cc) | 1.06 |
| Flash Point (TCC) | 185°F |
| Shelf Life @40°F | 1 year unopened |

Polymer (Cured)

| | |
|--------------------------------|--|
| Appearance | Colorless Solid |
| Service Temperature Range | -65°F to 200°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) | 3200 psi |
| Solubility | Nitromethane, Acetone, Dimethylformamide |

Military Specifications

Mil-A-46050C
 Type II, Class 1

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.

Performance of Cured Materials

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

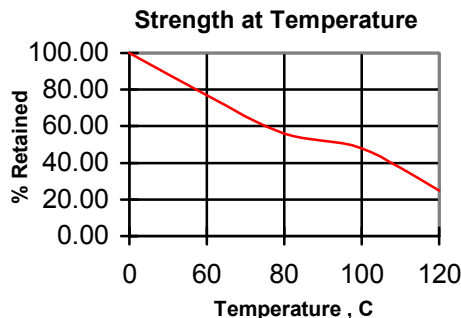
| Substrate | Range in N/mm2 |
|-----------------|----------------|
| Blasted Steel | 17 to 23 |
| Etched Aluminum | 13 to 21 |
| Neoprene | > 10 |
| ABS | > 6 |
| Polycarbonate | > 5 |
| PVC | > 6 |

Setting Time (68°F, 65% R.H.)

| | |
|---------------|------------------|
| Steel | 10 to 20 seconds |
| Aluminum | 7 to 14 seconds |
| Neoprene | < 4 seconds |
| ABS | 5 to 10 seconds |
| Polycarbonate | 10 to 20 seconds |
| PVC | 10 to 20 seconds |

Temperature Resistance

Sheer Strength on steel after 1 week at 22 °C



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.

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Chemical Resistance

Sheer strength on steel after 12 month soak
 % Strength Retained

| Solvent | % Strength Retained |
|-----------------|---------------------|
| Motor Oil | 100 |
| Gasoline | 100 |
| Trichloroethane | 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. Should this happen, wipe surfaces well with acetone.

Storage

Products should be stored unopened in a cool, dry place out of direct sunlight. Products can be refrigerated for improved shelf life but should be brought back to room temperature before use.

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

NOTE

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