Apollo 2241-05 is a black, medium viscosity, rubber- toughened ethyl cyanoacrylate adhesive. It provides superior shock and thermal resistance when bonding rubbers, metals, and plastics in harsh environments, and displays excellent strength and flexibility on a variety of substrates. Apollo 2241-05 is certified to ISO 10993-5 for biocompatibility, making it appropriate for use in medical applications.

### Physical Properties - Monomer (Uncured)
- **Base Compound**: Ethyl 10993-5
- **Appearance**: Black A-A-3097, Type II Class 3
- **Viscosity**: 500 +/- 100 cPs
- **Specific Gravity**: 1.06 g/cc
- **Flash Point**: 85°C/185°F
- **Shelf Life**: 9 mo

### Physical Properties - Polymer (Cured)
- **Full Cure Time**: 24 hours
- **Appearance**: Black
- **Service Temp Range**: -55 to 140 °C ( -67 to 284 °F)

### Setting Time
- **Steel**: 25 - 60 seconds
- **ABS**: 25 - 50 seconds
- **EPDM**: 20 - 40 seconds

### Performance of Cured Adhesive

<table>
<thead>
<tr>
<th>Substrate</th>
<th>N/mm²</th>
<th>PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>17.2</td>
<td>2500</td>
</tr>
<tr>
<td>Rubber*</td>
<td>4.9</td>
<td>710</td>
</tr>
<tr>
<td>AL</td>
<td>18.0</td>
<td>2610</td>
</tr>
<tr>
<td>PC**</td>
<td>17.8</td>
<td>2585</td>
</tr>
<tr>
<td>PVC**</td>
<td>11.4</td>
<td>1655</td>
</tr>
<tr>
<td>ABS**</td>
<td>15.5</td>
<td>2250</td>
</tr>
</tbody>
</table>

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

**Tested to ASTM 4501

***n/r = not recommended

### Specifications and Approvals
- **10993-5**
- **A-A-3097, Type II Class 3**

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

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

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

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Example</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Ethanol, Methanol</td>
<td>+ + +</td>
</tr>
<tr>
<td>Ester (aromatic)</td>
<td>Ethylacetate</td>
<td>– – –</td>
</tr>
<tr>
<td>Ketone (aromatic)</td>
<td>Acetone, Benzophenone</td>
<td>– – –</td>
</tr>
<tr>
<td>Aliphatic hydrocarbon (alkanes)</td>
<td>Petrol, Heptanes, Hexane</td>
<td>+ + –</td>
</tr>
<tr>
<td>Aromatic hydrocarbons</td>
<td>Benzyl, Toluol, Xylol</td>
<td>+ + +</td>
</tr>
<tr>
<td>Halogenated hydrocarbons</td>
<td>Methylenechloride, Chloroform, Chlorobenzol</td>
<td>– – –</td>
</tr>
<tr>
<td>Weak aqueous acid</td>
<td>Nitrite, muriatic acid, sulphuric acid, phosphoric acid</td>
<td>+ + + (– – – if concentrated)</td>
</tr>
<tr>
<td>Weak aqueous base</td>
<td>sodium hydroxide solution, caustic potash</td>
<td>+ + + (– – – if concentrated)</td>
</tr>
</tbody>
</table>

### 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.

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

Cyberbond, LLC  
401 N Raddant Road  
Batavia, IL 60510  
630.761.8900 tel  
[www.cyberbond1.com](http://www.cyberbond1.com)

Cyberbond Europe GmbH  
Werner-von-Siemens Straße 2  
D - 31515 Wunstorf  
Germany  
49 / 50 31 / 95 66 - 0 tel  
[www.cyberbond.de](http://www.cyberbond.de)

Updated 3/12/2013