

PACER
TECHNOLOGY

INDUSTRIAL • PRIVATE LABEL

3281 Guasti Road, Suite 260
Ontario, CA 91761
(909) 987-0550 (800) 538-3091
Fax: (909) 987-0490<http://pacertechindustrial.supergluecorp.com>**HP – High Peel Cyanoacrylates**

Pacer Technology HP Series cyanoacrylate adhesives exhibit unique characteristics – high T-Peel strength and thermal shock resistance. Pacer HP Series offers excellent performance for most bonding substrates. Four viscosity ranges meet a variety of gap-fill requirements and other application needs.

| LIQUID STATE | HP-10 | HP-500 | HP-3000 | HP-5000 |
|-----------------------------|----------------------------|---------------|----------------|----------------|
| Base Chemical | Ethyl Hybrid Cyanoacrylate | | | |
| Color | Clear, Translucent liquid | | | |
| Viscosity, cP | 5-15 | 400-600 | 2500-3500 | 2500-3500 |
| Flashpoint, °F (COC) | 185 | 185 | 185 | 185 |
| Vapor Pressure, mmHG @ 70°C | 6 | 6 | 6 | 6 |
| Specific Gravity (@25°C) | 1.05 | 1.05 | 1.05 | 1.05 |
| Gap Fill, Typical, inches | .002 | .012 | .020 | .020 |
| Soluble in: | Acetone, MEK, Nitromethane | | | |

| CURED STATE | HP-10 | HP-500 | HP-3000 | HP-5000 |
|---|---|---------------|----------------|----------------|
| Tensile Strength, steel (psi) | 4500 (±10%) | 4500 (±10%) | 4500 (±10%) | 4500 (±10%) |
| Impact Strength, (ft.lbs/in ²) Steel, (ASTM D950-54) | 10-15 | 15-20 | 20-25 | 20-25 |
| Rockwell Hardness, M | 73 | 67 | 64 | 60 |
| Outgassing (@ 10 ⁻⁶ mmHG, 72°F) | 0 | 0 | 0 | 0 |
| Softening Point, °F (°C) | 310 (155) | 300 (149) | 296 (147) | 296 (147) |
| Melting Point, °F (°C) | 366 (186) | 361 (183) | 356 (180) | 356 (180) |
| Temperature Range | -65F to +180F (-54C to +82C) | | | |
| Soluble in: | Pacer X-9 Debonder, Acetone, Nitromethane | | | |

| | HP-10 | HP-500 | HP-3000 | HP-5000 |
|-------------------------------|--------------|---------------|----------------|----------------|
| T-Peel Strength (lb/in) | | | | |
| Steel | 10-12 | 10-12 | 12-15 | 12-15 |
| Stainless Steel | 10-12 | 10-12 | 12-15 | 12-15 |
| Aluminum | 8-12 | 10-12 | 12-15 | 12-15 |
| Tensile Shear Strength, (psi) | | | | |
| Steel | 2800 (±10%) | 2900 (±10%) | 2900 (±10%) | 2900 (±10%) |
| Aluminum | 1600 (±10%) | 1600 (±10%) | 1600 (±10%) | 1600 (±10%) |
| PVC | SF* | SF* | SF* | SF* |
| Brass | 2300 (±10%) | 2300 (±10%) | 2300 (±10%) | 2300 (±10%) |
| Stainless Steel | 2700 (±10%) | 2700 (±10%) | 2700 (±10%) | 2700 (±10%) |

* Substrate failure

**APPLICATION AND CURE CHARACTERISTICS:**

For best results, parts should be clean, free from oil and grease or other contaminants. Apply adhesive to one surface to be bonded and mate the other surface to it carefully and without delay. For best results, use a minimal amount of adhesive. In general, one free-falling drop covers one square inch of bond area. Avoid over-application, as excess adhesive is difficult to remove from unwanted areas. Fixture time occurs in 1-5 minutes with 80% of full strength developing in 15-30 minutes. Fixture time and full cure rates are dependent upon temperature, relative humidity, bondline thickness, and substrates being bonded. To speed full cure through larger gaps, Pacer accelerators for instant adhesives are compatible and can be used. Post application of accelerators to exposed adhesive may cause a white frosting (chlorosis) of the exposed adhesive onto parts, which can usually be removed using Pacer X-9 Debonder and a cotton swab. Overall cure strength can be decreased as a result of using accelerators. Testing on actual parts is recommended.

| Specification Compliance | HP-10 | HP-500 | HP-3000 | HP-5000 |
|---------------------------------|--------------|---------------|----------------|----------------|
| MIL-A-46050C (Type/Class) | II/1 | II/3 | II/3 | II/4 |
| A-A-3097 (Commercial Spec) | II/1 | II/3 | II/3 | II/4 |

STORAGE AND SHELF LIFE:

Refrigerate unopened cyanoacrylate @ 40F (4C) for optimum results. Allow adhesive to reach room temperature before opening. Once opened, store in a cool, dry location. Stored under these conditions, a one-year shelf life can be expected.

SAFETY AND HANDLING PRECAUTIONS:

Cyanoacrylate adhesives bond skin in seconds. In case of skin contact, flush with water. If skin becomes bonded, peel (not pull) apart after immersion in warm, soapy water. In case of eye or mouth contact, flush with water and get immediate medical attention. Use with adequate ventilation. Vapors can irritate eyes and mucous membranes. Symptoms disappear after removal of individual from vapors. For more information, refer to Material Safety Data Sheet, available upon request.

In case of emergency, call CHEMTREC at (800) 424-9300 or call Pacer Technology at (800)-538-3091 (outside CA only), or 909-987-0550.

| Size | HP-10 | HP-500 | HP-3000 | HP-5000 |
|-------------|--------------|---------------|----------------|----------------|
| 5 g | | | | |
| 20 g | | FG04240 | FG04260 | |
| 1 lb | FG04213 | FG04243 | | FG04283 |

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