

# PACER<sup>®</sup> 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>

## TX – High Temperature Cyanoacrylates

Pacer Technology TX Series cyanoacrylate adhesives are specially formulated for use when applications requiring a cyanoacrylate adhesive will be exposed to continuous, elevated temperatures after cure. Applications such as wire/component tacking to circuit boards prior to wave soldering, use in high speed printer heads, and in electronic components in close proximity to power supplies, laser lamps and other similar heat sources. Three viscosities are available to meet a variety of application requirements.

<b>LIQUID STATE</b>	<b>TX-5</b>	<b>TX-100</b>	<b>TX-750</b>	<b>TX-2000</b>
Base Chemical	Ethyl Hybrid Cyanoacrylate			
Color	Clear, Transparent liquid			
Viscosity, cP	5-20	80-150	650-850	1500-2500
Flashpoint, COC, (°F/°C)	185 (85)	185 (85)	185 (85)	185 (85)
Vapor Pressure, mm Hg @ 70C	6	6	6	6
Specific Gravity (@20C)	1.05	1.05	1.06	1.08
Soluble In:	Acetone, MEK, Nitromethane			
<b>CURED STATE</b>	<b>TX-5</b>	<b>TX-100</b>	<b>TX-750</b>	<b>TX-2000</b>
Temp. Use Range – Intermittent	-65F to +300 <sup>0</sup> F (-54C to +149 <sup>0</sup> C)			
Temp. Use Range – Continuous	-65F to +280 <sup>0</sup> F (-54C to +138 <sup>0</sup> C)			
Outgassing (@ 10 <sup>-6</sup> mmHG, 72 <sup>0</sup> F)	0	0	0	0
Softening Point, °F (°C)	313/156	310/154	308/153	296 (147)
Melting Point, °F (°C)	369/187	368/187	366/186	356 (180)
Typical Gap, inches	.002	.004	.010	.020
Tensile Strength, steel (psi)	3000	3500	3500	3500
Rockwell Hardness, M	73	70	70	70
Soluble In:	Pacer X-9 Debonder, Acetone, Nitromethane			
<u>Tensile Shear Strength, (psi)</u>				
Steel	2700 (±10%)	2700 (±10%)	2700 (±10%)	2900 (±10%)
Aluminum	1900 (±10%)	2000 (±10%)	2000 (±10%)	2200 (±10%)
ABS	SF*	SF*	SF*	SF*
Rigid PVC	SF*	SF*	SF*	SF*
EPDM	100 (±10%)	100 (±10%)	100 (±10%)	100 (±10%)
Nylon	SF*	SF*	SF*	SF*
SBR	SF*	SF*	SF*	SF*
<u>Tensile Shear, Heat aging resistance</u> (steel, psi) Initial <sup>1</sup>				
7 days @ 212 <sup>0</sup> F (100 <sup>0</sup> C)	2700 (±10%)	2700 (±10%)	2700 (±10%)	2750 (±10%)
14 days @ 212 <sup>0</sup> F (100 <sup>0</sup> C)	2000 (±10%)	2000 (±10%)	2200 (±10%)	2300 (±10%)
7 days @ 248 <sup>0</sup> F (120 <sup>0</sup> C)	1525 (±10%)	1650 (±10%)	1700 (±10%)	1800 (±10%)
14 days @ 248 <sup>0</sup> F (120 <sup>0</sup> C)	1700 (±10%)	1800 (±10%)	1850 (±10%)	1950 (±10%)
7 days @ 285 <sup>0</sup> F (141 <sup>0</sup> C)	1300 (±10%)	1400 (±10%)	1450 (±10%)	1500 (±10%)
14 days @ 285 <sup>0</sup> F (141 <sup>0</sup> C)	1200 (±10%)	1275 (±10%)	1500 (±10%)	1575 (±10%)
7 days @ 285 <sup>0</sup> F (141 <sup>0</sup> C)	750 (±10%)	800 (±10%)	950 (±10%)	1000 (±10%)
<u>Tensile Shear, Hot strength</u> (steel, psi) Initial <sup>2</sup>				
Tested @ 248 <sup>0</sup> F (120 <sup>0</sup> C) after 1 hr.	2700 (±10%)	2700 (±10%)	2700 (±10%)	2750 (±10%)
Tested @ 275 <sup>0</sup> F (135 <sup>0</sup> C) after 1 hr.	1500 (±10%)	1500 (±10%)	1600 (±10%)	1650 (±10%)
Tested @ 275 <sup>0</sup> F (135 <sup>0</sup> C) after 1 hr.	1400 (±10%)	1400 (±10%)	1575 (±10%)	1600 (±10%)
Tested @ 302 <sup>0</sup> F (150 <sup>0</sup> C) after 1 hr.	800 (±10%)	800 (±10%)	850 (±10%)	925 (±10%)

\* Substrate failure <sup>1</sup> Samples pulled at room temperature. <sup>2</sup> Samples pulled at temperature indicated.



**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.

<b>Specification Compliance</b>	<b>TX-5</b>	<b>TX-100</b>	<b>TX-750</b>	<b>TX-2000</b>
MIL-A-46050C (Type/Class)	II/1	II/2	II/3	II/3
A-A-3097 (Commercial Spec)	II/1	II/2	II/3	II/3

**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.

<b>Size</b>	<b>TX-5</b>	<b>TX-100</b>	<b>TX-750</b>	<b>TX-2000</b>
5 g				
20 g	FG05101	FG05511	FG04504	FG05700
1 lb	FG05102	FG05512	FG04503	
20 kg		FG05513		