

# PERMABOND®

## 790 SERIES

### Cyanoacrylates



Ref #: 010104PB790s

#### TYPICAL APPLICATIONS

Rubber Bonding  
Model Assembly  
Jewelry Assembly  
Speaker Bonding  
Fabric and Leather Bonding  
Ceramics Bonding  
Wood Bonding

#### FEATURES & BENEFITS

- ◆ Extremely fast setting
- ◆ Wide range of viscosities
- ◆ Rapid cure through large gaps
- ◆ Surface insensitive – cures rapidly on most surfaces
- ◆ Easy to apply and dispense

#### GENERAL DESCRIPTION

PERMABOND 790 Series, available in a wide range of viscosities, provides extremely fast cure independent of gap.

The adhesives are surface insensitive and will rapidly bond wood and other substrates with acidic surfaces. Plastics, metals and elastomers are also rapidly bonded. The fast cure minimizes the occurrence of frosting and fogging. These adhesives are particularly well-suited for use on porous substrates, since they fixture before wicking into the surface pores.

Despite rapid cure, the products are very stable and will provide optimum performance for one year when refrigerated. They can be handled and dispensed with standard equipment.

The PERMABOND 790 Series provides the ultimate in performance for rapid assembly operations.

Non-Warranty: The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.

No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the non-existence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.

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**PHYSICAL PROPERTIES OF THE UNCURED ADHESIVE**

Properties:	PB 790	PB 791	PB 792	PB 795	PB 798	PB 799LV
Color	-----Clear, Slightly Yellow-----					
Viscosity (cP @ 20°C)	1-3	30-50	65-125	300-550	1200-3000	4000-6000
Specific Gravity	1.04	1.06	1.06	1.06	1.08	1.05
Maximum Gap Filling, in	0.002	0.004	0.006	0.008	0.017	0.020
Shelf Life stored at 2°C-7°C (35°F-45°F), months	----- 12 -----					
Flash Point, °C (°F)	----- 83 (181) -----					

**SET TIME, SECONDS**

	PB 790	PB 791	PB 792	PB 795	PB 798	PB 799LV
Steel and Buna-N	1-5	1-5	1-5	2-5	3-8	5-10
Phenolic	1-5	1-5	1-5	2-5	3-8	5-10
Balsa	2-7	2-7	3-8	3-8	3-8	6-12

Full Cure: 24 hours

**SET TIME, ACROSS 4 MIL GAP\***

PERMABOND 790 Series, Seconds	Conventional Ethyl Cyanoacrylate Adhesives of Similar Viscosity, Seconds
PERMABOND 792	6-8
PERMABOND 795	7-12
PERMABOND 798	8-12
PERMABOND 799LV	8-12
	55
	>60
	40
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\*As per PBI Test Method 225

**MILITARY SPECIFICATION**

	PB 790	PB 791	PB 792	PB 795	PB 798	PB 799LV
Type	II	II	II	II	II	II
Per Mil-A-46050-C*	Class 1	Class 1	Class 2	Class 3	Class 3	Class 4

\*A-A-3097 is intended to supersede Mil-A-46050C

## PERFORMANCE PROPERTIES OF THE CURED ADHESIVE

Soluble In	Nitroethane, Methyl Ethyl Ketone, Acetone
Lap shear strength on steel at 25°C, psi (ASTM D1002, 24 hours)	1500
Operating temperature, °C (°F)	-60 (-80) to 82 (180)

## SURFACE PREPARATION

The surface should be free of gross contamination such as dirt, dust, grease or oil. An alcohol wipe is suitable for cleaning most surfaces. Acetone is recommended for epoxies, polyesters, phenolics, melamine, urea formaldehyde, nylon and polyurethane. Optimum strength is obtained by abrading the surface followed by a solvent wipe to remove any loose particles.

## APPLICATION & DISPENSING

PERMABOND's Equipment Group has a complete line of dispensing equipment for all types of assembly and automated applications. Customized equipment can be designed to meet the specific application requirements. Contact your local PERMABOND Sales Engineer for a complete systems approach to dispensing the PERMABOND 790 Series.

## STORAGE & HANDLING

Cyanoacrylate adhesives are subject to an aging process and have a limited shelf life. The shelf life is one year when stored in a refrigerator. It could be less when stored at ambient environment depending on conditions of temperature and humidity.

A note of caution: Before opening, the containers must be warmed to room temperature; otherwise water might condense into the bottle and cause hardening of the adhesive.

Avoid skin contact. Wear polyethylene gloves and safety glasses. Do not use rubber or cloth gloves. Cyanoacrylates can form strong bonds rapidly to skin. To break the bond, peel and flex the skin carefully. Immersion in soapy water aids in breaking the cyanoacrylate bond. Acetone or nail polish remover may also be used. If cyanoacrylate should come in contact with the eye, seek medical attention.

Cyanoacrylate vapors are lachrymatory and can irritate eyes and mucous membranes. Use these materials with proper ventilation.

## VAPOR CONTROL RECOMMENDATIONS

1. Use adequate ventilation. Remove adhesive vapors with suitable exhaust ducting. Since cyanoacrylate vapors are heavier than air, place exhaust intake below work area. Activated charcoal filters using an acidic charcoal have been found effective in removing vapors from effluent air.
2. Avoid use of excess adhesive. Excess adhesive outside of the bond area will increase the level of vapors. Automatic dispensing equipment will prevent excess adhesive.
3. Assemble parts as quickly as possible. Long open times will increase level of vapors.

### *CLEAN UP OF SPILLED LIQUID*

When large quantities of cyanoacrylate adhesives are accidentally spilled, the area should be flooded with water that will cause the liquid cyanoacrylate to cure. The cured material can then be scraped easily from the surface. NOTE: The liquid adhesive should not be wiped up with rags or tissue. The fabric will cause polymerization and large quantities of adhesive will generate heat on cure, causing smoke and strong irritating vapors. ALWAYS FLOOD WITH EXCESS WATER TO CLEAN UP SPILL CONDITIONS.

**FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.**