

PERMABOND®

POLYOLEFIN PRIMER

GENERAL DESCRIPTION

Permabond Polyolefin Primer (POP) was developed for surface treatment of polyolefins and silicones prior to bonding with Permabond Cyanoacrylates (superglue) adhesives. Due to their low surface energy, plastics such as PTFE, Polypropylene (PP), Polyethylene (PE) and silicones are difficult to bond without surface treatment. After treatment with Permabond POP Primer durable bonds can be achieved. The use of **Permabond POP** can offer an alternative to flame or plasma treatment prior to bonding with cyanoacrylate adhesives.

Permabond POP is fluorescent for easy detection under UV light (375nm).

The use of **Permabond POP** is only recommended for use on polyolefin and silicone substrates being bonded with Permabond Cyanoacrylate adhesives.

PHYSICAL PROPERTIES OF THE UNCURED ACTIVATOR

Appearance	Colorless liquid
Viscosity	2
Specific gravity @ 25°C	0.68
Flash Point, °C (°F)	-4.4 (24)
Boiling Point, °C (°F)	98 (208)
Drying time @ 23 °C (73°F), seconds	30
Evaporation Rate (butyl acetate = 1)	2.8
Fluorescent Under UV light (375 nm)	Yes
Shelf Life stored between 5°C and 25°C (41°F and 77°F), months	12

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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PERFORMANCE OF THE CURED MATERIAL

Substrates	Product number	Untreated	Treated
		Shear Strength (psi)	Shear Strength (psi)
Polypropylene (4mm)	Permabond 105	72.5 (AF)	1000 (SF)
Polypropylene (4mm)	Permabond 2010	40 (AF)	1000 (SF)
Polypropylene (2mm)	Permabond 105	16 (AF)	500 (SF)
Polypropylene (2mm)	Permabond 2010	22 (AF)	500 (SF)
Polyethylene (2mm)	Permabond 2010	0 (AF)	400 (SF)
PTFE (6mm) to mild steel PTFE only treated with Primer	Permabond 105	0 (AF)	600 (AF)

Samples were allowed to cure for 24 hours at 23°C before testing SF - Substrate failure AF – Adhesive failure

ENVIRONMENTAL RESISTANCE (DURABILITY)

Shear strength on polypropylene treated with Polyolefin Primer after exposure at 60°C

After 168 hours	100% retention of initial shear strength
After 500 hours	100% retention of initial shear strength

DIRECTIONS FOR USE

Surfaces should be clean, dry and grease free prior to primer application. POP should be applied only to the low energy surfaces either by wiping (using a clean cloth or brush), spraying, or dipping and the components must be allowed to dry at ambient temperature prior to bonding. For polyolefins, bonding with Permabond Cyanoacrylate adhesive can be performed up to 2 hours after surface treatment with POP. For PTFE, immediate bonding is recommended. Handling time and cure speed will depend on the substrates and adhesive selected. (Handling time is the time from when the joint is assembled until enough adhesive strength has developed to allow for careful handling of the joint.) For maximum bond strength, allow adhesive to cure for 24 hours at 23°C. **POP** is formulated to minimize attack and maximize performance on certain plastics, however it is recommended that the product be tested for compatibility prior to use in production.

STORAGE & HANDLING

Caution: PERMABOND POP is flammable. Keep container tightly closed. Isolate from heat, electrical equipment, sparks, open flame and other sources of ignition. Ground bond all transfer equipment. Use non-sparking tools and equipment. Store and use only in a well ventilated area with appropriate grounding of ventilation equipment.

POP has a shelf life of one year from date of shipment from Permabond when stored at or below 25°C (77°F). **Do not freeze.** Avoid breathing vapor. Prevent contact with skin or eyes. If contact occurs, flush with water. For eyes, seek medical attention. Prolonged or repeated contact with the skin may cause irritation. Harmful if swallowed.

Caution: Do not add POP directly to any cyanoacrylate adhesive as this can lead to a vigorous reaction producing an excessive amount of heat and vapors.

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