LiONBOND bonding solution ®

TECHNICAL DATA SHEET

MMA PLASTIC BONDER

LIONBOND™ TTC-PPX5

LiONBOND™ TTC-PPX5 polyolefin adhesive is a two-part (10:1 ratio by volume) acrylic- based plastic bonder, with working time of between 4 to 6 minutes, and fixture time of about 90 minutes. It is effectively bonds polyolefin substrates (PP, PE, PVDF, PTFE...) with little to no surface preparation and no primers required. The off-white mixed adhesive is resistant to most automotive and industrial solvents, including ethylene glycol, brake fluid, power steering fluid and iso-pentane. It will give assembly engineers an alternative bonding technology for joining low surface energy thermoplastics such as polypropylene or polyethylene. More, It can be used to bond dissimilar plastic substrates (polypropylene, polyethylene, polycarbonate, and PMMA), metals (carbon steel, stainless steel and aluminum), or fiber-reinforced plastics with a minimum of surface preparation to reduce labor costs and production cycle times.
TTC-PPX5 Polyolefin adhesive provides an alternative bonding technology to mechanical assembly or solvent welding, and it can replace screws, rivets, plastic welding. In addition, it produces a bond with excellent resistance to water and humid environments.

Key Properties

- Bonds dissimilar substrates
- Structurally Bond Polyolefins
- One step : no surface pre-treatment or primer required
- Very good chemical resistance
- Low exotherm – less surface distortion
- Convenient and easy to dispense by gun
- Solvent-free Adhesive System
- Room temperature cure
- Excellent water and humidity resistance

Characteristics

	Part A	Part B	Mix (Part A + B)
Color	Off White	Clear	Off White
Mix ratio by volume	10	1	—
Mix ratio by weight	9.8	1	
Density, g/cc	1.05	1.03	1.05
Viscosity, cps	9,000	10,000	—

Recommended substrate

- **Potential Primary Surfaces** Polypropylene (PP), Polyethylene (PE, HDPE, LDPE) PTFE, PVDF...
- **Potential Secondary Surfaces** Fiber Reinforced Plastic (FRP) ,PVC, Polycarbonate (PC), ABS, Wood, Acrylic (PMMA) Aluminum, Polystyrene, Glass, Concrete, Thermoplastic Elastomers (TPE) Metals
- **Not Recommended Surfaces** Nylons, Silicone Surfaces, Polyimide

Surfaces Containing Mold-Release Agents, Substrates that contain oils and anti-stats.

Typical physical properties @ 75°F (24℃)

Substrates	Shear Strength (Unit: psi)	Failure
Polypropylene (PP)	1075	Substrate Failure/Break
Polyethylene (PE)	1100	Adhesive Failure
Polycarbonate	850	Failure/Break
Plexiglass (PMMA)	950	Substrate Failure/Break
Copper (1/16" thick)	2275	Adhesive Failure
Carbon Steel	2050	Failure/Break
Aluminum (1/16" thick)	2275	Cohesive Failure
304 Stainless Steel (1/32" thick)	2300	Cohesive Failure

Typical reactivity properties @ 75°F (24°C)

Product Working Time (minutes) 5-6 minutes

Fixture Time3 (minutes) 90 to 240 minutes

Note:

1. The strength will come to 80% of final strength after 24 hours.
2. The strength will be more and more higher in the coming some weeks since cured.

Storage	For maximum shelf life, store cartridges and bulk containers at 40°F (4°C) or below. When stored at the recommended temperatures in the original unopened containers, this product has a shelf life of 6-8 months from date of shipment.