FAQs

What makes HiPURformer™ polyurethane hot melt adhesive stronger than conventional hot melts?

HiPURformer™ polyurethane hot melts form an initial bond immediately upon cooling, similar to conventional hot melts. Additionally, PUR's offer a second phase where the adhesive reacts with moisture to form an extremely strong chemically cross-linked bond. At this point, the adhesive actually penetrates the substrate and makes a strong chain, producing a strong, permanent bond.

Will the adhesives foam as they cure?

No. The foaming associated with pourable polyurethane glues will not occur with polyurethane reactive hot melts. You may experience squeeze-out similar to other glues, which can easily be removed from the surface.

How much time does the cross-linking reaction take?

The cross-linking reaction takes place over a period of time ranging from hours to days and bond strength builds proportionately. The initial bond has enough strength to allow assemblies to be machined or finished immediately after the ahesive has set. Load bearing joints should not be stressed for 24-48 hours, so that the cross-linking reaction can occur.

Where does the moisture that fuels the reaction come from?

Moisture from the air and substrates fuels the reaction. The amount of moisture may affect the set time and cure time of the adhesive.

Will I need to use clamps?

Although clamping or bracing can ensure a good bond, HiPURformer™ adhesives greatly reduce the need for this application. HiPURformer™ is the ideal choice for projects that are difficult to clamp and require a fast, strong bond.

How can I prolong the shelf life of the adhesive?

If unopened, the cartridges should be kept in the foil pouch and stored in a cool, dry location. Do not expose to rain or moisture. Before shutting down for the day, extrude a one-inch bead of adhesive to ensure that any air has been purged from the cartridge tip and immediately replace the cartridge cap tightly while the adhesive is hot. CAUTION: Do not touch applicator heat cylinder or cartridge when at maximum temperature. Always wear gloves.

Who should be contacted in the event of a medical emergency?

For emergencies, contact Chemtrec at 800-424-9300 or Chemtrec International at 703-527-3887. For additional information, contact Franklin security at 614-445-1300.

How do I get the adhesive off my hands?

We strongly recommend that you wear gloves when using HiPURformer™ polyurethane hot melt adhesives. However, if you do get the adhesive on your skin, wash thoroughly with soap or a pumice cleanser. Repeated washings may be necessary.

How long does it take to heat the adhesive to working temperature?

It takes approximately 10 – 13 minutes for the adhesive to become liquid. It may appear to be thicker than traditional glues you may have used, but the product will flow nicely out of the cartridge.

How long can I work until I need to recharge?

After the material has heated to the working temperature, you will have approximately 20 minutes of "cordless" gluing. When it appears that the adhesive is becoming too thick to be extruded from the cartridge, slide the adhesive applicator back into the charger.

Safety

- Basic safety precautions should always be followed to reduce the risk of personal injury. For detailed procedures, read the instruction manual packaged with the HiPURformer™ Adhesive Applicator.
- Always wear gloves when working with the HiPURformer™, as the adhesive and heat cylinder become extremely hot.
- Do not touch exposed adhesive until it has hardened.

User Tips

- Make sure the adhesive is fresh. All HiPURformer™ adhesives have a one-year shelf life in the unopened foil pouch. Take note of the expiration date, as marked on the top portion of the foil pouch.
- Each new adhesive cartridge MUST be heated for at least 12 minutes. (The green light will remain on temporarily if the heat cylinder is hot from previous use.)
- First time users should practice applying the adhesive on scrap materials to better understand product performance characteristics.
- When finished using the adhesive, take the necessary precautions to prolong the shelf life to a minimum of four weeks.
  - Extrude a one-inch bead of adhesive to ensure there is no air in the cartridge tip
  - Replace the cartridge cap tightly while the adhesive is hot
- Do not allow the cartridge/adhesive to continually heat without use for more than 17 hours at a time.
- While the HiPURformer™ adhesives provide waterproof bonds, this product is not designed for applications below the waterline or for continuous submersion.

Clean-Up

- Allow any excess adhesive to become firm (it turns from clear to opaque). This adhesive can be easily scraped off of the surface with a putty knife. Fully cured adhesive must be removed with a chisel, scraper, or sandpaper.
- If adhesive gets on your skin, use soap or hand cleaner to remove. If unsuccessful, common solvents (rubbing alcohol) may be used.

Titebond Technical Help Line 1-800-347-GLUE

Adhesives Made By

Franklin International

2020 Bruck Street, Columbus, Ohio 43207
Telephone 800-877-4583 titebond.com

Applicator Made By

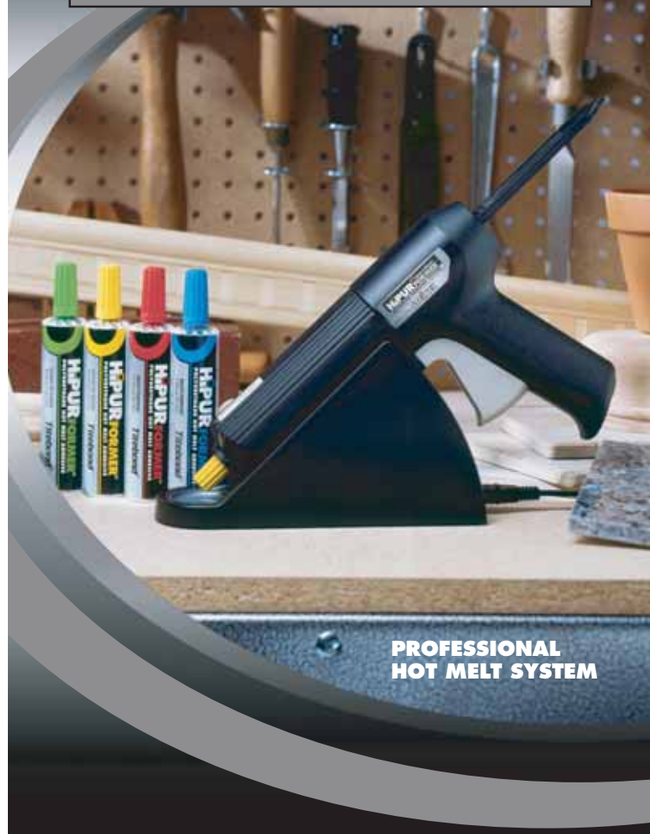
STEINEL®

9051 Lyndale Avenue South, Bloomington, MN 55420
1-800-852-4343 www.steinel.net

FF 663 8/04 VC

Titebond®

HiPURFORMER™ Polyurethane ADVANCED BONDING SYSTEM



PROFESSIONAL HOT MELT SYSTEM

WOODWORKING

- Drawer assembly
- Face frames
- Miter joints
- No clamp glue-ups

FINISH CARPENTRY

- Crown/trim molding
- Cabinet assembly
- Ornamental fixtures
- Window/door casings

CONSTRUCTION/REPAIR

- Furniture repair
- Maintenance repair
- Countertop backsplash
- Outdoor furniture assembly

Why Polyurethane Hot Melt?

Polyurethane hot melt technology is not new to the adhesive industry. In fact, polyurethane hot melts have been successfully utilized for many different applications for several years. They combine the positive attributes found in various, unique adhesive technologies and deliver them in a single product. Polyurethane hot melt adhesives outperform traditional hot melts, offer a faster set than "yellow" glues, and provide a more permanent, less brittle bond than "super" glues. In addition, this technology provides a strong, waterproof bond, reduces the need for clamping/bracing and works on most common woodworking, construction and home repair materials. Polyurethane hot melt adhesives… a truly advanced bonding system.

Industry Challenges

Until now, the versatility of polyurethane hot melt adhesives has been available exclusively to the larger furniture and woodworking markets through industrial channels. The major obstacle to widespread implementation of this technology has been the lack of a suitable application system. The large, cumbersome adhesive guns required to apply these products are much too bulky, confining and costly for the smaller to moderate user. In addition, the amount of adhesive offered in 10.5 oz. cartridges is often too much for the average application, resulting in excessive waste.

The HiPURformer™ addresses these issues and enhances the availability, effectiveness and value of utilizing an advanced polyurethane hot melt system. A forward-thinking, strategic alliance between Franklin International and Steinel now eliminates all obstacles and allows for woodworkers, contractors and do-it-yourselfers of all skill levels to take advantage of the benefits offered by polyurethane hot melts.

The Adhesives

All Cartridges Feature FLX-Valve™

- *Precise bead application*
- *Eliminates drool and mess*
- *Allows repeated use until cartridge is empty*

Physical Properties

PRODUCT	WW30	WW60	MP75	MP300
Set Time	30 Seconds	60 Seconds	75 Seconds	5 minute
Viscosity	7,600 cps (thin)	12,000 cps (thick)	9,500 cps (med.)	11,000 cps (thick)
UV Indicator	✓	✓	✓	✓
Waterproof	✓	✓	✓	✓
100% Solids	✓	✓	✓	✓
Interior/Exterior	✓	✓	✓	✓

Strength Development

MAPLE TO MAPLE	WW30	WW60	MP75	MP300
10 minutes	650 psi	600 psi	270 psi	118 psi
1 hour	1090 psi	1130 psi	600 psi	478 psi
24 hours	1360 psi	1480 psi	900 psi	1016 psi

Recommended Applications

SUBSTRATE	WW30	WW60	MP75	MP300
Wood*	E	E	G	E
Steel	NR	NR	E	E
Ceramic	NR	NR	E	E
Aluminum	NR	NR	E	E
ABS	NR	NR	E	E
Concrete/Brick	NR	NR	E	E
Vinyl	NR	NR	E	E
Glass/Marble	NR	NR	E	E
Melamine*	NR	NR	E	E
PVC*	NR	NR	E	E
Lexan*	NR	NR	E	E
FRP*	NR	NR	E	E
Copper	NR	NR	NR	G
Brass	NR	NR	NR	G

E = Excellent adhesion **G** = Good adhesion **NR** = Not recommended
*Bonded materials will break before the adhesive joint

- Set time may vary with application temperature, ambient temperature, and thermal conductivity and temperature of the substrates.
- Substrates that oxidize, such as copper and brass, must be abraded prior to bonding.
- Coverage (maximum): 1/8" bead = 18 linear feet, 3/32" bead = 31 linear feet, 1/16" bead = 71 linear feet.

Delivery System

- **FLX-Valve**™ technology is designed to permit easy, controlled adhesive extrusion. The FLX-Valve™ keeps air and moisture away from the moisture-cure contents of the cartridge, ensuring initial and repeat use, while preventing adhesive drool.

- The **trigger handle** is constructed with durable components and provides refined adhesive control.

- The sturdy, lightweight **adhesive applicator** is engineered for durability and dependable delivery of adhesive. It contains reinforced components and tough construction materials to ensure long-term reliability even under the most rigorous shop conditions. The applicator provides a heightened level of convenience and reliability in the HiPURformer™ system.
- The **base charger** heats the adhesive cartridges contained within the applicator to allow for cordless operation. Indicator lights on the base turn from red to green, indicating when the adhesive has reached a flowable state and is ready for use.
- The **heating cylinder** allows for the adhesive cartridge to remain heated for 20 minutes of cordless operation, making it easy to take directly to the job or project being worked on, regardless of location.

Applicator Highlights

- To detach heat cylinder from the trigger handle, pull the trigger and simultaneously twist the cylinder counterclockwise.
- Heat up time for a cold cartridge is 10-13 minutes.
- The cartridge remains heated in the cordless applicator for 20 minutes.
- The base charger can be mounted on a firm surface using 1/9" (2.9mm) diameter screws to secure, using the holes provided on the bottom of the unit.

A Revolutionary Solution

The HiPURformer™ Polyurethane Advanced Bonding System is the perfect solution for almost all of your bonding needs. It combines the highest-quality polyurethane hot melt adhesives with the most efficient, cost-effective application system. Our proprietary formulation has set a new standard for excellence in performance and application, and provides superior bonding performance for many woodworking, construction and repair projects.

The Adhesives…
HiPURformer™ polyurethane hot melt adhesives are manufactured by Franklin International, the makers of Titebond® Glues & Adhesives. Recognized as the leader in bonding wood and wood materials since 1935, Franklin is vertically integrated through innovative polymerization, resulting in superior adhesives for many applications. Plus, our innovative 50-gram cartridge is the perfect size for most users and applications.

The Application System…
Until now, the use of polyurethane hot melt technology has been difficult and costly. The HiPURformer™ Polyurethane Advanced Bonding System utilizes the patented, innovative adhesive applicator from German manufacturer Steinel. This quality applicator carries an extended warranty and is cordless, lightweight and extremely easy to use.

Recommended Uses/Applications

- Finish carpentry
- Trim/crown molding
- Broken glassware
- Wooden frames
- Vinyl & linoleum repair
- Drawer assembly
- Cabinet repair
- Shoe repair
- Carpet tack strips
- Laminate countertops
- Ceramic lawn ornaments
- Peeling wallpaper
- Soap dishes & towel bars
- Chair/table repair
- Paneling/Wainscotting
- Ceramic ceiling tiles
- Upholstery repair
- Flooring thresholds
- Arts & crafts
- Displays & signs
- Sports equipment
- Rearview mirror
- Construction/remodeling
- Plastic patio furniture