



PolyOne GLS™ Versaflex™ Flexible Bonding for Healthcare

In a recent study, PolyOne Corporation’s thermoplastic elastomer materials were tested with Henkel Corporation’s LOCTITE® adhesives for their bonding efficacy in medical device applications. The findings show that a number of these materials and adhesives, when used together, can optimize a manufacturer’s assembly processes.

For more than four decades, LOCTITE® adhesives have been tested to comprehensive ISO 10993 biocompatibility standards and have been specified by medical device manufacturers all over the world. But how did they perform with PolyOne materials?

Testing showed that when bonding PolyOne GLS™ flexible tubing materials with PVC connectors, both LOCTITE Light Cure Acrylic Adhesives and Cyanoacrylic Instant Adhesives performed with bond strengths above typical customer requirements. This demonstrates that both adhesion techniques are a viable alternative to solvents when used with the following six grades of PolyOne GLS™ Versaflex™ materials.

LOCTITE® LIGHT CURE ACRYLIC ADHESIVES

ADHESIVES	ADVANTAGES
LOCTITE® 3922™	Exceptional sterilization and environmental resistance
LOCTITE® 3341™	Exceptional adhesion to highly plasticized PVC and other difficult-to-bond substrates

LOCTITE® CYANOACRYLATE INSTANT ADHESIVES

ADHESIVES	ADVANTAGES
LOCTITE® 4902™	Highly flexible (>30%), fast fixture
LOCTITE® 4011™	Fast fixture, good for acidic substrates and dry environments
LOCTITE® 4061™	Low viscosity, good for acidic substrates and dry environments



Henkel has the right adhesive for your application—whether your medical device assembly requires an adhesive that is biocompatible and sterilizable, or one that meets a host of other performance characteristics.



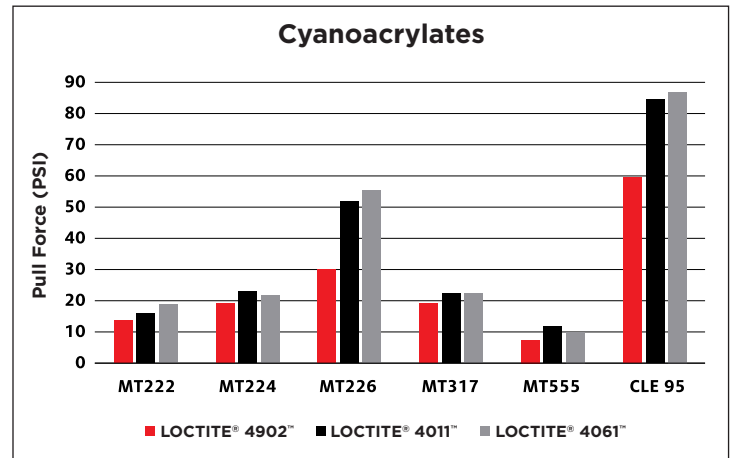
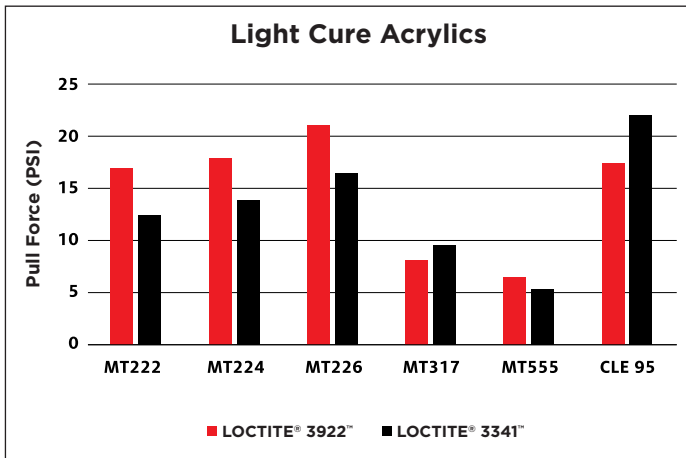
LOCTITE® brand adhesives offer many benefits, including:

- Structural bonds
- Ability to bond dissimilar and difficult substrates
- Increased throughput
- Rapid fixture and overall cure times
- Excellent gap-filling capability
- Even stress distribution
- Comprehensive biocompatibility testing



POLYONE GLS USP VI & ISO 10993-4,5 COMPLIANT SOLUTIONS

GRADES	CHARACTERISTICS	APPLICATIONS
Versaflex™ MT222	Shore 65A, High clarity without plasticizers	Medical and biopharm tubing
Versaflex™ MT224	Shore 75A, High clarity without plasticizers	Medical tubing
Versaflex™ MT226	Shore 85A, High clarity without plasticizers	Medical and biopharm tubing and film
Versaflex™ MT317	Shore 68A, Translucent, high temperature	Medical and biopharm tubing
Versaflex™ MT555	Shore 54A, Translucent, high temperature	Medical and biopharm tubing
Versaflex™ CLE95	Shore 95A, High clarity without plasticizers	Medical films and tubing



TESTING DETAILS

- Testing performed in Henkel laboratory
- Testing performed under ISO 4587
- Test specimens tube (1/4" OD) into PVC connector (1/4" ID)
- Specimens bonded as received and tubing not cleaned prior to assembly
- Light Cure Adhesives cured with LOCTITE® Spot System, item #97057, 365 nm
- Cyanoacrylates room temperature cure

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