



ASSEMBLE TOGETHER

# Innovative Solutions for the Assembly of TPE Medical Devices

**Henkel Corporation and Teknor Apex collaborated to test various thermoplastic elastomers (TPEs) and adhesives used for medical devices. The findings show that Henkel’s new TPE bonding adhesives demonstrate superior bonding on lower surface energy TPE blends.**

For more than four decades, LOCTITE® medical device adhesives have been tested to Henkel’s comprehensive ISO 10993 biocompatibility protocols and have been specified by medical device manufacturers all over the world. However, advances in elastomeric materials widely used for medical tubing have introduced assembly challenges. Henkel is delighted to present a bonding solution for these new tubing materials.

Medalist® thermoplastic elastomers (TPEs) from Teknor Apex offer the elasticity and flexibility of rubber with the ease of processing and recyclability of thermoplastics. Medalist TPEs are known for their versatility for medical applications such as tubing, face masks. They meet ISO 10993-5 standards and are produced in ISO-13485 certified facilities.

Medalist® TPEs	Description
Medalist® MD-12372	High performance TPE with a medium hardness, low density, is halogen-free and can be sterilized. It is specifically designed for use in healthcare applications, particularly for extruded medical tubing and injection molding applications for medical devices.
Medalist® MD-41255	High performance TPE with a medium hardness, low density, is halogen-free and is RoHS compliant. Is it specifically designed for healthcare and medical applications.
Medalist® MD-53273	High performance, clear TPE with low density, a medium hardness, is lubricated, and is available in natural and color matched. It is designed to be a sustainable alternative to flexible PVC for medical tubing and film and has excellent processability and throughput in extruded tubing.

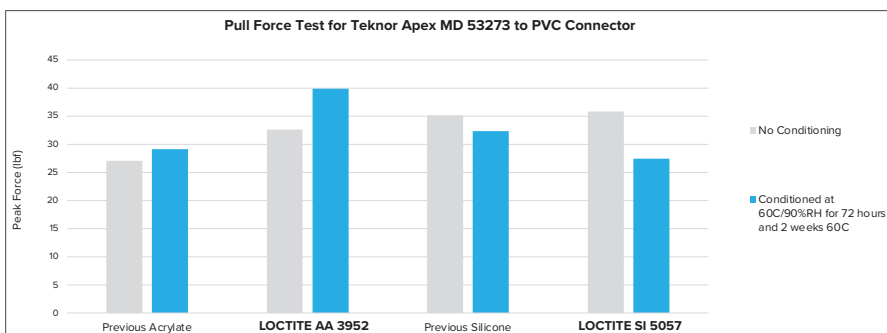
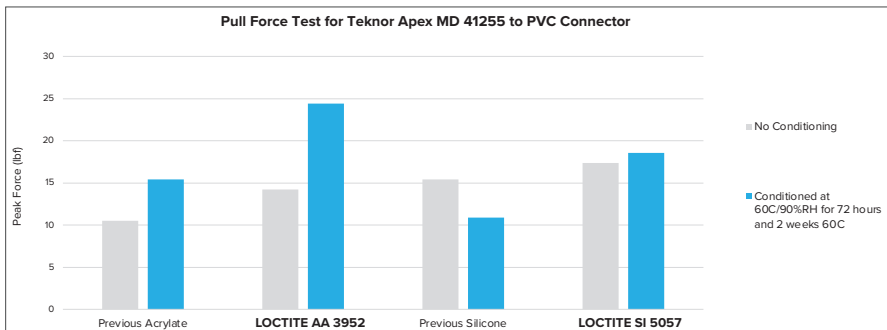
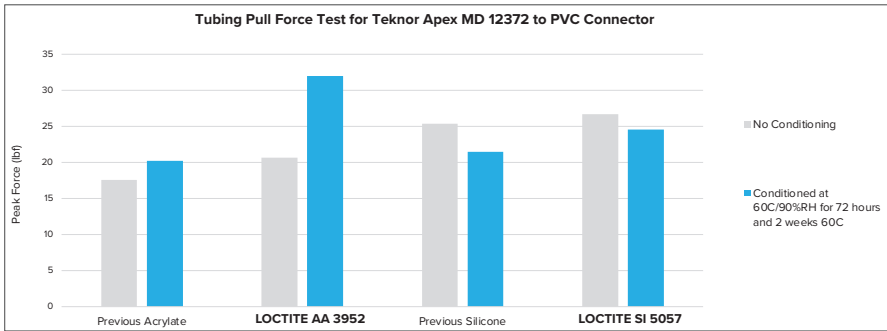
## Teknor Apex Medalist® Series TPE



# LOCTITE® Light Cure Medical Device Adhesives

Adhesive	Features
LOCTITE® 3952™	Flexible Light-cure Acrylic Adhesive, designed for bonding TPE blends, Blue Fluorescent, 600cp
LOCTITE® 5057™	Highly Flexible Light-cure Acylated Silicone Adhesive, designed for bonding TPE blends, Blue Fluorescent, 750cp

# LOCTITE® TPE Bonding Adhesives



## Testing Details

- ¼” OD Tube to PVC connector bonds (0.4” engagement length) cured with the LOCTITE CL42 405nm LED, measured at 1 W/cm<sup>2</sup> for 10 seconds per side
- Pull test conducted using a mechanical tester pulled at 200 mm/min, clamping the specimen 0.25” away from the bond line

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