

# Bonding Solutions for Stopcock Valves

## Opportunity

A medical device manufacturer in the U.S. making a rotating stopcock valve was having problems passing quality tests. A light curing adhesive is needed that bonds well to PC, maintains pressure and vacuum systems during surgical procedures, and reduces failure rates.

**Substrates:** PC (Polycarbonate)

## Challenges

- Competitive Light Cure Acrylic had a 90 to 95% failure rate during real time aging tests
- High failure rate slowed production output and delayed order shipments
- Elevated scrap rate greatly increased the overall cost per part

## Solutions

**Product(s) used:** [Loctite 3301 Med](#)

### Components

No cleaning or priming is required of the parts prior to adhesive application.

### Dispense and Cure

[Loctite 3301](#) is dispensed into a glue well designed into the part structure and the parts are then assembled. In the next step the adhesive is cured by a UV or visible light source.

### Post Assembly

The rotating stopcock valves assembled with the Loctite Medical Adhesive now pass all quality testing requirements and meet customer performance expectations.



## Benefits

- [Loctite 3301](#) passes rotation and tensile strength testing with only a 3% scrap rate
- ISO 10993 product certification reduced the time required to approve the adhesive for production
- The Henkel adhesive solution improves product quality, lowers part costs, and increases line output