

# **Two-Shot Bonding Capabilities** for Medical Device Manufacturers

## The Two-Shot Material Difference

Two-Shot molding is an automated manufacturing process where two different materials are molded together in a single machining cycle. As an innovative pioneer in multi-component silicone molding, Saint-Gobain Medical Components has decades of experience understanding and troubleshooting material science. Our material experts can guide you to a solution that is well designed for manufacturing and will work to ensure the final part meets your print specifications. With extensive material experience comes in-depth knowledge of bondability of silicone to various thermoplastic materials.

The table below highlights the knowledge Saint-Gobain has accumulated regarding material families and the ability to bond to silicone in a two-shot process. Further details are available upon request and final part performance should be tested.

# **Typical Bonding Properties**

|               |   | Silicone   |            |            |            |
|---------------|---|------------|------------|------------|------------|
|               |   | Shore A 30 | Shore A 40 | Shore A 50 | Shore A 60 |
| Thermoplastic | Polycarbonate                                   | +          | +          | +          | +          |
|               | PC/ABS  | N/A        | +          | +          | N/A        |
|               | Nylon   | +          | +          | +          | +          |
|               | PEEK  | N/A        | +          | +          | N/A        |
|               | PBT   | +          | +          | +          | +          |
|               | Polysulfone                                     | N/A        | +          | +          | N/A        |
| *N/           | *N/A signifies not tested or no data available. |            |            |            |            |

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## Features / Benefits

- Elimination of adhesives and assembly
- Improved part performance and quality
- Increased bond strength of components
- · Greater design freedom
- Reduced part handling & validation costs
- Product to market faster

### **Substrates That Bond to Silicone**

- Polycarbonate
- ABS alloys
- PEEK (Non-BPA)
- · Polysulfone (Non-BPA)
- PBT (Non-BPA)
- · Nylon (Non-BPA)

#### **Related Documents**

 Two-Shot Silicone-Thermolplastic Molding Design Guide

Important: "Please refer to our Medical Products Disclaimer at www.medical.saint-gobain.com/ resources/regulatory-and-quality/medicalproduct-disclaimer.

Saint-Gobain's medical products offer covers:

- Medical Components [21 CFR 820.3(c)], intended for processing or use in the manufacture or assembly of medical devices before the finished medical device is packaged/labeled; Medical Components are intended to be included as part of the finished, packaged, and labeled device [21CFR820.3(c)].
- Finished Devices [21CFR820.3(I)] made on behalf of medical device manufacturers [21 CFR 807.20(a)(2)] under contract-manufacturing agreement. In accordance with the United States' jurisdiction. Saint-Gobain complies with the FDA's requirements for contract manufacturers of finished devices."

