

Materials in PendoTECH Single Use Pressure Sensors

Introduction

The PendoTECH Single Use Pressure Sensors have proven to be an invaluable tool to measure pressure in many process operations. As more customers are in the process of qualifying them for use in their process or are considering using the sensors in certain processes, the information on the material used in the sensors becomes a required piece of information. This Technical Note is designed to provide some of the details on the materials.

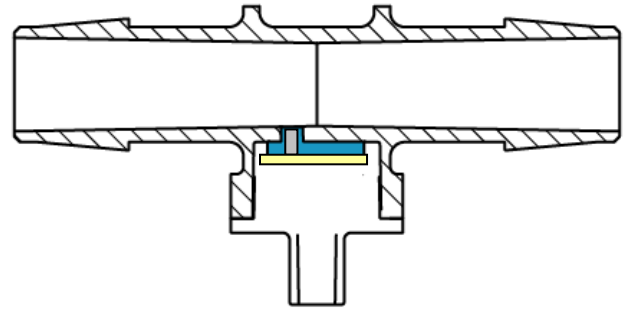


Flow Path Materials

1. Sensor body (> 99% of surface area)-
Two materials are offered as alternatives for different customer applications, polycarbonate and polysulfone. Polysulfone offers better chemical compatibility including compatibility with NaOH (Application Note available).
 - a. Part numbers starting with PRESS
 - i. Bayer Makrolon Rx1805 polycarbonate
 - b. Part numbers starting with PREPS
 - i. Solvay UDEL P1700 polysulfone

2. Pressure Sensing Chip
 - a. The material that isolates the liquid in the fluid path and away from the electronics and serves to communicate pressure between the flow path and pressure measuring diaphragm is a two-component, cured in place insoluble dielectric silicone
 - i. Proprietary formulation
 - b. Molded plastic component that is affixed to the pressure sensor body, part of which is a shallow well to hold the insoluble silicone
 - i. Proprietary polycarbonate plastic formulation (tested for NaOH resistance by PendoTECH)

3. Adhesive
 - a. Used to affix the molded plastic component of the pressure sensing chip to the pressure sensor body
 - i. Dymax proprietary formulation



| Component | Biocompatibility Testing ⁽¹⁾ | Animal Derived Material Content ⁽²⁾ |
|--|---|--|
| Bayer Makrolon Rx 1805 | USP Class VI ISO 10993 | Animal Derived Component Free |
| Solvay UDEL P1700 | USP Class VI ISO 10993 | Animal Derived Component Free |
| Dielectric Silicone | USP Class VI ⁽³⁾ ISO 10993 ⁽⁴⁾ | Animal Derived Component Free |
| Pressure Sensing Chip Proprietary Plastic | USP Class VI ISO 10993 | Meets EMEA 410 Rev 2 Guidelines |
| Dymax Proprietary Adhesive | USP Class VI ISO 10993 | Animal Derived Component Free |

⁽¹⁾ Data from manufacturer unless otherwise noted

⁽²⁾ Letters on file at PendoTECH

⁽³⁾ Testing by PendoTECH

⁽⁴⁾ Tested as part of fluid path of finished device