



» APPLICATION BULLETIN

Engineered Materials for Respiratory Care Devices

Medical manufacturers face complex material challenges when designing products for respiratory healthcare applications, including CPAP machines, ventilators, and oxygen delivery systems. To address those challenges, Avient draws on a deep understanding of regulatory requirements, patient safety standards, and formulation expertise to develop high-performance thermoplastic and elastomer materials tailored to provide reliability, biocompatibility, and precision.

Whether you're designing for comfort, durability, or airflow optimization, we're here to help you breathe innovation into every product.

HOW AVIENT CAN HELP

- Regulatory-compliant material solutions, including ISO 10993 and USP Class VI
- Innovative & custom formulations, including sustainable alternatives to traditional materials
- Global quality management system & change control processes
- Color & additive expertise
- Regional supply reliability and international manufacturing capabilities
- ISO 13485 compliant facilities
- Dedicated product stewardship, technical, and regulatory support teams



To learn more about our custom formulations and services, connect with us at [avient.com](https://www.avient.com).

A Breath of Innovation

Discover advanced materials to help you create next-generation devices and systems that deliver critical performance and meet evolving patient demands.

DURABILITY

- Chemically resistant thermoplastics
- Antimicrobial technologies

AESTHETICS & HAPTICS

- Ultra-soft, low compression TPEs
- Colorability
- High-clarity TPEs

PERFORMANCE

- Vibration damping TPEs
- Flame retardant polymers



FEATURED SOLUTIONS

Avient offers a broad portfolio of ready-made thermoplastic elastomers (TPEs) and medical-grade thermoplastics for achieving a range of performance demands. Included here is a small sampling of these materials. If your device has unique needs, our team will work with you to customize or develop a formulation to meet those needs.

Product	Hardness	Key Characteristics	Applications
Versaflex™ HC MT TPEs	66A–95A	High clarity, without plasticizers	Hose
Versaflex™ CL 2250 Grade	50A	High clarity, boilable	Hose
Versaflex™ HC 3810 Series	20A–90A	Formulated without animal derivatives, excellent colorability, translucent	Hose, mask, cuffs
Versaflex™ OM Series	42A, 59A	ABS/PC overmold, high clarity	Machine housing
Versaflex™ VDT Grades	32A–43A	Vibration damping	Machine housing
GLS™ TPEs	45A, 65A	Embedded antimicrobial technologies	Machine housing, mask
Trilliant™ HC Thermoplastics	–	Chemically resistant, UL 94 V-0 flammability, colorable	Machine housing

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