



## ➤ APPLICATION BULLETIN

# A LOOK INTO THE FUTURE VIRTUAL REALITY

Your customers are early adopters, and their technology expectations run high. Whether they're training for a job in a cutting-edge technical field or seeking total immersion in a gaming environment, they count on you to transport them to new worlds. And when they get there, they want devices that move with them and keep the new 'dimension' free from distractions.

Your mission: design virtual reality hardware that keeps the player in the game. In other words, eliminate interference. The last thing users should notice is the device itself. Depending on the need for immersion, VR gear can be either used repeatedly in short bursts or worn for long periods of time. It's important to ensure the device performs well from the first time to the last.

This is where our materials and design engineers can help. Our injection-moldable materials enhance design freedom and reduce bulk, while also managing heat-buildup and preventing cross talk. Whether you need to meet certain material specs, or are just looking to push the envelope and develop the world's most durable, comfortable, and striking VR gear, our materials and design engineering team are ready to help you make your dreams possible.



# BETTER EXPERIENCES. VIRTUAL & IRL

The virtual reality experience isn't just about on-screen content. It's also about headsets that are both durable and appealing. Whether you're designing fittings for PC-connected systems, or for smartphone-installed devices, we can help you craft a game-changing experience for the user.

## WEARABLE COMFORT

Flexibility, Skin- Compatible Comfort, Soft Touch, Heat Reduction

**SOLUTION:** Thermoplastic Elastomers (TPEs), Thermoplastic Urethanes (TPUs), Silicone, Nylon (PA)

## AESTHETIC APPEAL

Metallic and Custom Effects, FDA-Approved Masterbatch Colorants

**SOLUTION:** Custom Polymer Colorants, Pre-Colored Resins

## WEAR PERFORMANCE

Wear-Resistance

**SOLUTION:** Polyester (PET), Nylon (PA), Acetal (POM)

## TOUGHNESS

Impact Strength, Chemical Resistance

**SOLUTION:** PC/Polyester Blends, Copolyester



## ERGONOMICS

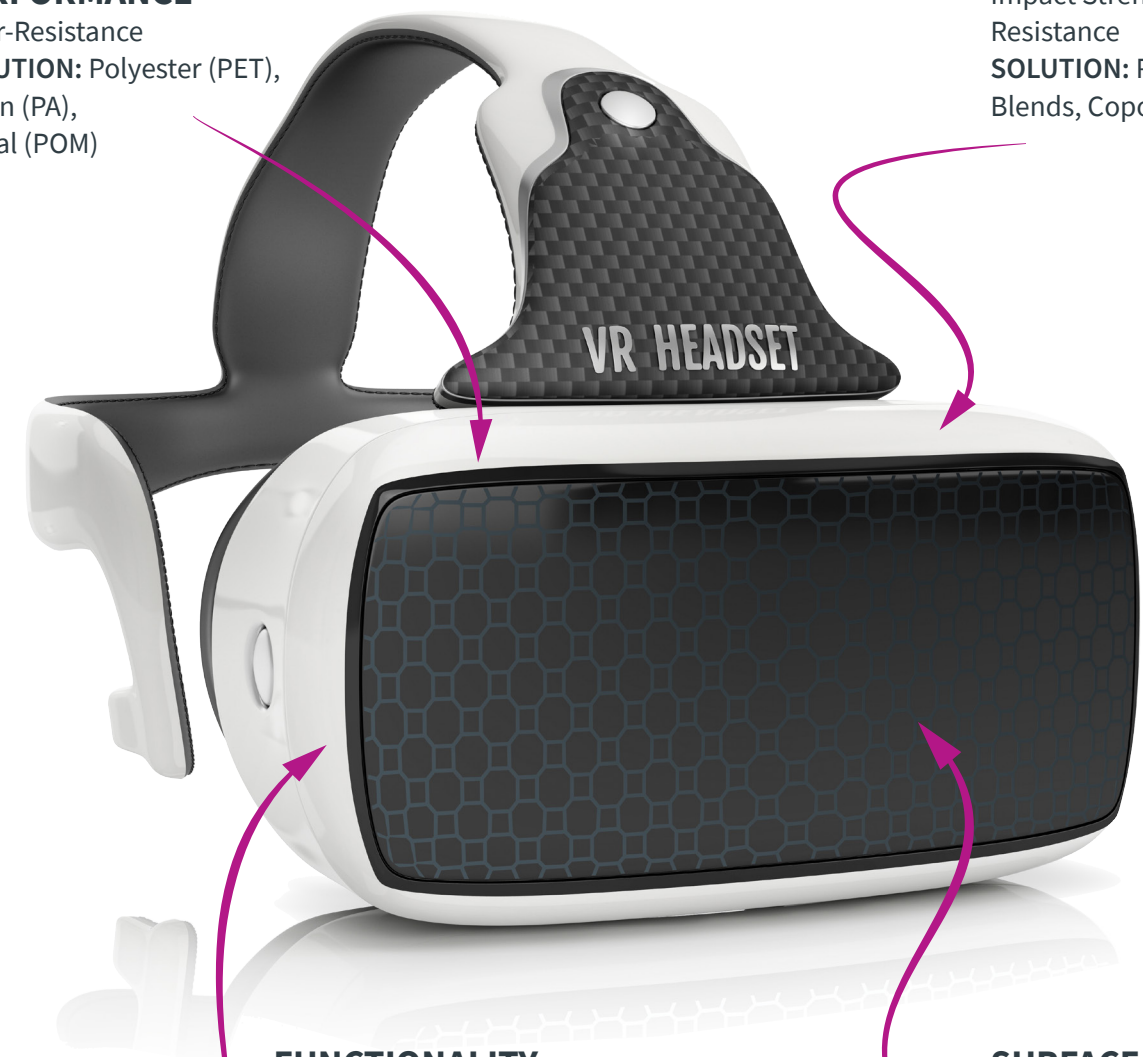
Soft Touch, Easy to Grip

**SOLUTION:** Thermoplastic Elastomers (TPEs), Thermoplastic Urethanes (TPUs), Silicone

## DURABILITY

Impact Strength, Rigid or Flexible Materials

**SOLUTION:** Thermoplastic Elastomers (TPEs), Thermoplastic Urethanes (TPUs), Copolyester, Polycarbonate, PC Blends, PMMA, Styrenics, Nylon (PA), Silicone



## FUNCTIONALITY

Impact Resistance, Dimensional Stability, Strength

**SOLUTION:** Copolyester, PC/ Polyester Blends, Polycarbonate, Styrenics

## SURFACE PROTECTION

Performance Enhancing Additives

**SOLUTION:** Antimicrobial Additives, Scratch and Mar Additives

# DISCOVER. DESIGN. REPEAT.

Material selection is just the beginning. Now let's bring it all together. When you understand materials and their attributes from the start, incorporating them into a breakthrough device becomes a whole lot easier. You can fine-tune every element of your gear, from design and fit to ergonomics and feel. Let us help you go from concept to reality in record time.

## Virtual Reality Devices

Our materials provide comfort, durability and appeal for VR devices used in the following enterprise and commercial applications.

- Construction
- Architectural design
- Virtual tours

### REAL ESTATE

### DEFENSE

- Battlefield simulation
- Flight & vehicle simulation
- Medic training
- Virtual bootcamp

### HEALTHCARE

- Surgical simulation
- Phobia treatment
- Robotic surgery
- Skills training
- Diagnostics

### CONSUMER

- Video games
- Live events
- Video entertainment
- Theatre
- Virtual theme parks
- Virtual museums & galleries

### EDUCATION

- Virtual immersion
- Global connectivity

### RETAIL & FASHION

- Virtual stores
- 3D human forms for design
- 3D fashion portfolios

### ENGINEERING

- 3D modeling tools
- Design tools
- Prototyping

1.844.4AVIENT  
[www.avient.com](http://www.avient.com)



Copyright © 2020, Avient Corporation. Avient makes no representations, guarantees, or warranties of any kind with respect to the information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the information. Avient makes no warranties or guarantees respecting suitability of either Avient's products or the information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the information and/or use or handling of any product. AVIENT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the information or products reflected by the information. This literature shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.