



Writing Instruments

"Craft Your Words with Precision: Unleash Creativity with Our Sketch Pens, Whiteboard Wonders, and Permanent Magic!"

Our mission is to provide innovative writing solutions through superior fine fiber technology.

Fine Fiber Products

Fine fiber consists of bonded fibrous materials that can be extruded into three-dimensional shapes. The directionally aligned fibrous strands contain voids or pores that can be controlled independently. This feature is particularly useful for fluid control applications that require either faster flow or greater liquid absorption. While the materials mentioned are common in designing fine fiber components, there are various other options available. Work closely with your Process Engineer to specify your requirements, and they can assist in selecting the best materials.

Size Options:

Fine fiber can be manufactured in a variety of shapes. Our Process Engineers will collaborate with you to determine the best size, shape, and dimensions for your needs. Typical shape options include:

Rods and Tubes:

Understanding how the final product or device will be assembled is crucial. Our team can help you develop a fine fiber solution that reduces assembly time and complexity by combining multiple parts into a single custom-engineered piece.



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BBM Fine Fiber Technology



Made from different thermoplastic materials with varying properties, our materials are moldable for high-ink retention volume applications and customizable for easy fabrication and conversions. We provide cylindrical formats tailored to your needs.

Production Process:

Fine fiber utilizes heat and pressure in the bonding process, similar to bonded fine fiber plastics. Instead of bonding particles, it bonds fibers together with heat and pressure. Bonded fibers are wrapped with PP to achieve the required size and shape, and fibers are bonded in various configurations in rod form.

Physical Properties:

When designing a fine fiber component, understanding three key physical properties which impact the materials and functionality is critical:



Ink Reservoir Filter Systems As Per Customer Needs:

As a Global Leader in the science of ink flow management BBM has got advanced technology in Fine Fiber using our expertise, our Process Engineers can design customized reservoirs in various colors to meet customer requirements, providing maximum ink delivery and control while preventing leaks. The world's largest writing and pen manufacturers depend on the quality and consistency of our components to enhance device performance, build their brands, and earn customer loyalty.

Material Options:

Materials for bonded fibers are carefully evaluated based on product and application requirements. Four of the primary materials include:

Polyolefins (PP):

The most commonly used material with a simple molecular structure, but with temperature limitations in some applications.



Polyamides (Nylon 6, Nylon 6,6)

If heat resistance and compatibility is a concern, then polyamides are a good option which are used in hydrophobic to hydrophilic applications.

Other Suitable Materials:

- Cellulose acetate (CA) for biodegradable applications.
- Co-polymers in various configurations.

1. Pore Size:

It refers to the dimensions of the voids within the porous material. Depending on the material, pore size can vary, accommodating the specific requirements of the customer. Fine fiber can regulate liquid retention, flowability, storage, and other factors through the diameter of the directional fibers and the density of the materials.

2. Pore Volume:

The percentage of air within the part compared to the total volume of the part is known as pore volume. In porous fiber materials, density is a more frequently used reference and is inversely proportional to pore volume. Fine fiber components are offered in a range of densities, from very low to high, depending on the desired capabilities. Higher pore density results in a lower pore volume and vice versa. Higher density parts can achieve greater absorption and flow resistance for liquid materials, while lower density parts can achieve increased speed and overall flow.

3. Operating Temperature:

It refers to the range within which the final porous fiber part must function effectively. A comprehension of typical material proportions will guide you in choosing the appropriate polymer for your device's function and operating conditions.

Common Applications For Fine Fiber:

Fine fiber rods are suitable for ink reservoir applications and can store ink for extended periods without dripping. They offer ample storage capacity for various writing applications, such as sketch pens, whiteboard markers, and permanent markers. These materials can also be used for paint marking and surgical applications while meeting appropriate hygiene standards.



Chemical Properties:

Choosing the appropriate polyester yarn material is crucial to ensure the long-lasting functionality of markers. One of the essential considerations is assessing the potential chemical interactions between the fine fiber component and paper. This assessment is necessary to guarantee both smooth writing and long-lasting performance without any flow issues. Additionally, polyester-designed yarn should be free from any properties that could lead to clogging or drying during ink storage.

