



Dyneema Purity® Radiopaque fiber

The only medical-grade radiopaque ultra-high-molecular-weight-polyethylene (UHMWPE) fiber in the world, designed for the use in orthopedic trauma applications. Dyneema Purity® Radiopaque fiber is designed to support the development of medical devices for use in orthopedic trauma. The fiber contains a radiopaque agent which enables surgeons to visualize implants during and after surgical interventions.

Improving the design of orthopedic trauma devices

Like other Dyneema Purity® fibers, Dyneema Purity® Radiopaque fiber is a medical-grade fiber that is 15 times stronger than steel at similar weight, while maintaining increased flexibility and high pliability. The fiber's ability to conform to bone may help lower the risk of bone damage when compared to metal, resulting in increased patient comfort and potentially shorter healing time. Using Dyneema Purity® Radiopaque fiber to improve the design of devices in orthopedic trauma could help to reduce tissue inflammation, irritation and complications associated with metal allergies, due to the fiber's biocompatibility and chemical inertness.

Providing significant advantages in the design for a wide range of applications

Dyneema Purity® Radiopaque fiber facilitates the design of medical

products that perform at the highest level. In orthopedic trauma, Dyneema Purity® Radiopaque fiber has been developed as a possible alternative to replace metal, when used in the design of surgical cables to treat bone fractures. Where textile structure strength is necessary in combination with a low profile, such as in orthopedic sutures for soft tissue repair, Dyneema Purity® Radiopaque fiber can facilitate fast and reliable repair without compromising patient comfort. Lastly, Dyneema Purity® Radiopaque fiber can be used in laminar wires for high performance spinal repair, spinal fusion, disc replacement and interspinous devices and for designing stronger, more reliable devices used in emerging procedures like dynamic stabilization and other non-fusion applications.

Summary of Product Benefits

- Inherently radiopaque fiber
- Visible under X-ray during and after surgical interventions
- High pliability and softness
- High strength and high modulus
- Lower profile with equivalent strength
- Proven biocompatibility



DSM received 510k clearance from the FDA for Dyneema Purity® Radiopaque Cerclage Cable to be used in orthopedic trauma which will support DSM customers to facilitate the market launch of their medical device in this application area.

Typical mechanical performance characteristics

Tensile strength of 28 cN/dtex (3.6 GPa) and elongation at break of 3.2%.

To watch product videos and animations and to read white papers on Dyneema Purity® fiber, please visit www.dyneemapurity.com.

Quality and Regulatory

Like all Dyneema Purity® fibers, DSM has a Material Master File available at the FDA for Dyneema Purity® Radiopaque fiber. It is produced according to ISO 13485 and DSM has aligned its quality management system with the quality management system applicable within the medical device industry.

Dyneema Purity® is a registered trademark of DSM.

Product Disclaimer

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