

Dyneema Purity[®]

TG fiber

A proprietary medical grade ultra high molecular weight polyethylene fiber that delivers both high strength and lowest profile

Dyneema Purity[®] TG fiber is as strong as our SGX fiber but thinner, enabling smaller implants. The TG grade helps meet the need for developing smaller and lowest profile implants, keeping in mind the desire to minimize size of devices in cardiovascular application, without compromising mechanical performance.

Ideal for delicate procedures

The fiber is developed with delicate procedures such as transcatheter cardiovascular applications in mind. An extremely low friction coefficient facilitates sliding inside a catheter against other materials, while its softness and smaller size reduce the invasive nature of implantable devices, lowering tissue inflammation and irritation.

Summary of Product Benefits

- Lowest profile yet high tensile strength 40 cN/dtex (4GPa) and modulus 1400cN/dtex (135GPa).
- Excellent fatigue and abrasion resistance
- Low friction coefficient
- Proven biocompatibility and hemocompatibility
- Effective combination of high pliability and low elongation
- Stronger than steel, soft as silk

Provides significant advantages across a wide range of applications

Dyneema Purity® TG fiber facilitates the design of medical products that perform at the highest level, including the following examples:

- High-pressure balloon catheters that are strong, yet maintain a low profile
- Smaller neurovascular catheters that maintain the highest mechanical integrity
- Lower profile, yet mechanically robust textile and suture structures in covered-stent applications
- Stronger, thinner textile designs in heart valves and annuloplasty
- Leads with lower profiles and enhanced mechanical integrity for neurovascular and cardiac rhythm disease management
- Reduced profiles in neurological applications where both size and strength make a difference

Dyneema Purity® fiber is easy on the body

Dyneema Purity® TG fiber is extremely soft and chemically inert, reducing the invasive nature of implantable devices and lowering tissue inflammation and irritation. This can increase patient compliance and comfort as well as accelerating recovery.

Dyneema Purity® TG fiber also has excellent fatigue and abrasion resistance and is non-hemolytic. It has been successfully tested according to ISO 10993 for genotoxicity, cytotoxicity, sensitization/irritation, and mutagenicity.

Typical mechanical performance characteristics

Tensile strength 40 cN/dtex (4GPa) and modulus 1400cn/dtex (135GPa).

Tensile strength and modulus depend on grade and yarn size. Please contact DSM for more details.

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

Material Master Files available at the FDA and Notified Body.

Dyneema Purity® fiber is produced according to ISO 13485.

Dyneema Purity® is a registered trademark of DSM.

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