

SPECIAL PERFORMANCE SPECS IN EXELTO® STAPLE FIBERS

EXELTO® Staple Fibers are made from 100% virgin polypropylene polymers, or can be a mix with partly recycled polymers ("green fiber") or a mix of different polyolefin materials (including different grades of LLDPE, HDPE and LDPE). Whatever it takes to make the best possible fiber suited for a specific need, be it in carpet, geo-textiles, agro-textiles, hygiene, automotive, filtration, construction, composites or spinning... EXELTO® can modify its fibers through the right finish or additive in the mass in order to accomplish the requested characteristics and performance.

Main characteristics

- Polypropylene (and other PO) fibers: from 2.8 – 510 dTex (2.5 den – 460 den)
- Lengths: from 6 mm (short cut) to 210 mm (very long cut)
- Bico fiber: from 1.7 to 4.6 dTex SHEAT/ CORE in PES/PP
PP/PE PES/PE
- Crimps: 2-8 / cm
- Normal and high tenacities (up to 5.4 cN/Dtex)
- Different melting points of the fiber - 100°C – 110°C - 130°C - 163°C in order to reduce thermoforming temperatures, energy and costs.
- Own MB production: one of EXELTO® divisions is a MB production unit, where all possible standard and exclusive colors are made in-house through proprietary extrusion techniques.



Fiber performance

- **Hydrophilic and hydrophobic** (basic or permanent) can be achieved depending on the application.
- **Anti Bacterial:** environment-friendly and wide-range treatments for all possible applications. Solutions available for customers that risk bacteria, fungi or algae on their products. Insect repellent applications are in development stage.
- **Anti Oxidant:** additives protecting PP and other Polyolefins ensure the long lifetime of the fibers. Applications are numerous in automotive, geotextiles and individual composites.



- **Flame Retardant:** the desired degree of flame resistance can be added in the fiber on a permanent base (i.e. even after cleaning of the final product, the flame retardancy remains). Examples of standards reached in different applications: upholstery & mattresses BS5852/2 (cigarette test) and BS5852/3 (crib5) / aviation industry FAR25 / automotive industry FMVSS 302 result A / construction ISO 11925kleinbrenner result B2 / B and S1 on European Radiant Panel test ISO 9239 . With respect for production, end user and environment, EXELTO® works with halogen free and heavy metal free products.

Product Data Sheet

- **High Tenacity:** fibers available with tensile strength up to 5.4 cN/dtex for extreme tensile strong applications. Combinations of high tenacity with good elongation are also available, where the combination of viscosity with tenacity leads to better results in puncture and bursting strength.



- **UV Resistant:** EXELTO® has developed a broad experience in this field, in outdoor as well as indoor and in automotive. The newest and most sophisticated equipment to measure and monitor quality is available in-house.

- **Low Rest Shrinkage:** the final step in many end products is done by thermoforming. Here for stability reasons in shape and dimensions, the needlefelt should not be influenced anymore by high temperatures.

- **Graft Fiber:** A newly developed fiber that offers excellent affinity to plastics or other materials, thanks to a special treatment. E.g. in composites, resulting in better adhesion of the PP fiber to glassfiber, PES, metal surfaces...

- **Soft Touch fiber:** special treatment provides a fiber with a soft and pleasant touch, comparable to e.g. acrylic fiber. Applications: craftwork, fillings, blankets...