# ETC-Bounce - ”Air-Trapping” Bicomponent Fiber

In its wide product programme *ES FIBERVISIONS* also has bicomponent fibers with polyester core: The ETC-Bounce fiber.

The key benefit of polyester bicomponent fiber is high bulkiness and high resiliency.

ETC-Bounce fiber – polyethylene/ polyester bicomponent fiber from *ES FIBERVISIONS* was developed based on our strong know-how in the fiber process and polymer technology, and as a result, ETC-Bounce fiber was given excellent bulkiness, resilience and softness.

As widely known, polyester (PET) has a much higher melting point and resiliency compared to polyolefin polymers. Consequently, the fibers have a "bounce back effect" after an applied load is released.

High bulkiness and resilience give outstanding liquid acquisition performance to the nonwoven through optimum fiber properties achieved by combining our advanced fiber knowledge with finish technology.

PET also has a much higher melting point than that of polyolefine polymers. This allow PE/PET bicomponent fibers to have a very broad bonding window.
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This melting point difference between the sheath and the core gives high heatsealing performance to the fabric, because the polyester core remains intact even after heatsealing process and provides high tensile strength to the sealed part.

Depending on production method and application the ETC fibers provide a good alternative and a good supplement to other *ES FIBERVISIONS* fibers for carded nonwovens:

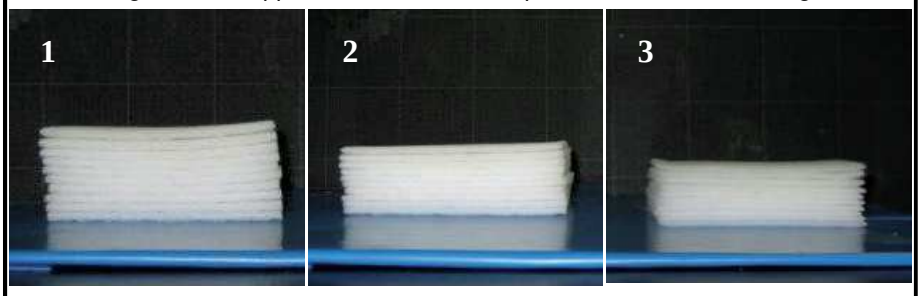
- ES-C Cure and ES-Tendon-C: these fibers are developed to optimize the bonding strength of bicomponent nonwovens
- ES-Delta: a fiber, which optimizes the bulkiness of nonwovens made from PE/ PP bicomponent fibers
- ES-Lowmelt, which allows bonding a very low temperatures

**ETC Fiber Properties (typical values)**

| | |
|---|---|
| Dtex: | 2.2 - 6.7 dtex |
| Density: | 1.155 g/cm$^3$ |
| Tensile strength: | 1.0 - 3.5 cN/dtex |
| Elongation: | 40-100% |
| Fiber length: | |
| - for carding | 38-75 mm |
| Crimp frequency: | 50-90/10 cm |
| Spin finish: | 0.3-0.5% |
| Melting point: | |
| • of polyethylene sheath | 130°C |
| • of polyester core | 252-253°C |

*Polyolefin fibers consist of 99% carbon and hydrogen. The remaining 1% consist of water and applied spin finish. The fiber bales are protected with polyolefin foil and closed with polyester straps. The product and the packaging materials are suitable for recycling and combustion. Inhouse waste should be kept clean to facilitate direct recycling. In disposal of any waste, be certain all applicable regulations are met.*
*For further information contact your ES FIBERVISIONS representative.*

**Figure: *Illustration of the bulkiness and resilience of ETC-Bounce Fiber***
We have prepared 10 sheets of nonwovens based on bicomponent fibers. Then a 5 kg load was applied for one hour. The pictures show the following:




From the left:

Picture 1: 10 sheets of ETC-Bounce NW before the load was applied
Picture 2. 10 sheets of ETC-Bounce NW after the load
Picture 3: 10 sheets of ES-C NW before the load was applied

Conclusion: The ETC-Bounce achieves better bulkiness and resilience compared to other fibers

*(Internal Test Method) Typical values were obtained at our Fiber Technical Center.*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**March 2013**