TECHNICAL TUESDAYS

POLYESTER AND ITS BLENDS – PART IV

REF: TT/ JULY 2020 / WK 4

Innovations in Polyester fiber (Continued…)

- **Anti - microbial Polyester fiber –** A high- tech polyester fiber that has Inherent anti-microbial property. These fibers are manufactured by dispersing the silver ions inside the polymer during spinning. These fibers were developed to inhibit the growth of odor-causing bacteria, mold, mildew and algae on fabrics. Antimicrobial fabrics are very useful in medical industry. These fibers can be mixed with other textile fibers to produce antimicrobial wound dressings and other related applications.
- **UV – resistant Polyester fiber -** UV radiation causes the deterioration of standard Polyester polymer bonds that weakens the fibers. A UV-resistant fiber absorbs and dissipates the UV rays, therefore minimizes the deterioration of the polyester yarn. Through a special production process, UV-resistant property is incorporated into the polymer to become its inherent property.
- **Bi-Component Polyester fibers –** Bi-component polyester fibers are the fibers which are generated during the spinning process from two polymers having different chemical or physical characteristics. Bi-component fibers exhibit innovative new uses.

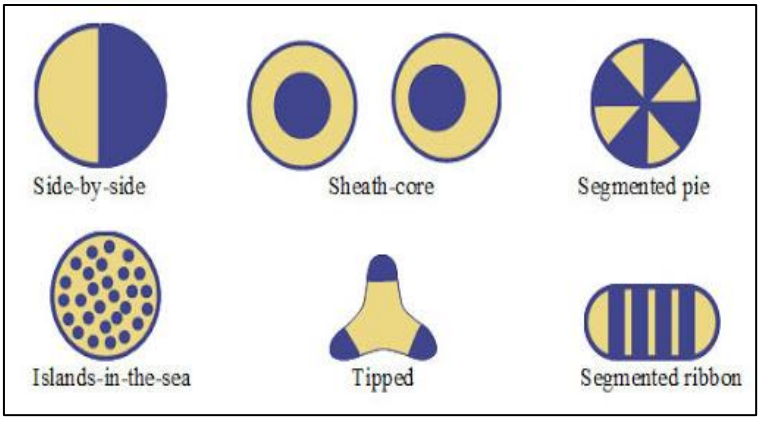

Fig 1.1 Arrangements of fibers in bi-component polyester fiber

Ref: eacharya.inflibnet.ac.in

- **Recycled polyester -** Performance and functional versatility of recycled polyester is same as that of virgin polyester. The main benefit of recycled polyester is its lower environmental impact. Recycled polyester doesn't require new raw material i.e. new petroleum to manufacture. Thus lowering the use of petroleum extraction and reducing overall carbon footprint.

Recycled polyester is manufactured by collecting clear plastic bottles. Then they are broken down into small pieces or chips. These plastic pieces are then converted into tiny pellets, melted, and spun into yarn.

Besides reducing the usage of petroleum, the manufacturing of recycled polyester also decreases greenhouse gas emissions compared to producing virgin polyester. Water usage is also significantly decreased during the manufacturing process. Recycled polyester reuses a material which is not biodegradable and would either add up to landfill or pollute the water bodies. Thus contributing towards green or healthy environment.

Interesting facts

- One T-shirt can be made by recycling around 9 PET bottles.

- One Jean can be made by recycling around 8 PET bottles.

- Recycled Polyester emits approximately 75% less CO2 than virgin polyester during its manufacturing.

Fig 1.2 PET bottles to Polyester fiber
Ref: textilefocus.com

- **Ocean Recycled polyester –** Ocean Recycled Polyesters are environmentally friendly recycled fibers, made from recycled ocean waste plastics and perform as regular virgin polyester. This helps to reduce the flow of plastic waste into our oceans or beaches. These fibers with special spinning technology produce high quality fibers. The fluffy, soft and durable fibers are used as fillings for bedding products.

.....To be continued.....

UNSCRAMBLE THE JUMBLE WORDS
CLCYERED
POCONENTM
EAOCSN
STERSITNA

Last week`s Answers: 1) MICROFIBER 2) SPINNING 3) POLYESTER 4) FILAMENT

Wishing you a great week ahead!

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