

## **Recron™ Staple Fibre Guide**

The Recron™ Staple Fibre products are preferred by spinning/composite mills for yarn manufacture as 100% PSF or in blend with cotton or viscose staple fibre (VSF). These products are offered in various polymer types like raw white, dope dyed black, optical white or cationic dyeable.

### **Recron™ Superblack**

This is dope dyed black polyester fibre which gives the spinner a superior alternative to fibre or yarn dyeing option. The yarns manufactured using Recron™ Superblack are superior in strength, U% and imperfections and process better on spinning equipment. The consistency and depth of shade is also better with superior washing and staining fastness.

### **Optical White (OW)**

This is optically white polyester fibre to give end products better whiteness. The fabrics like dhotis, sarees, dress materials, hosiery and sheeting which offered in whites or light pastel shades or prints have better aesthetics value due to whiter background. These products are also preferred for 100% PSF threads in the white and light dyed range.

### **Recron™ Superdye**

Recron™ Superdye fibre characterized by its bright & brilliant colours, is easily dyeable with Cationic dyes at lower temperature. It can also be dyed with regular disperse dyes to give darker shades. It imparts soft feel, less pilling and gives superior touch in the fabric. Using this high quality fiber and its blends, apparels and furnishing fabrics can be made more economically with rich and vibrant colours

### **Recron™ Dyefast**

The innovation of Recron™ Dyefast fibre broke the barrier of dyeing polyester that needs costly high temperature and high pressure dyeing (HTHP) machines. With Recron™ Dyefast it is now possible to dye polyester at boiling water temperature. It offers

opportunities for the first time to process houses having only simple cotton dyeing equipment. The Fabrics and garments both woven and knitted made of Dyefast and its blends Impart softer feel, excellent drape, easy care, high colour fastness & superior durability

## **Polyester Tow (TOW)**

For worsted spinning, the product is offered in Tow form which is converted to tops for processing as 100% polyester or in blend with wool tops to produce superior quality of worsted yarn/fabrics.

Polymer Types

## **Raw White (RW)**

A wide range of polyester products are offered from white polymer either as PSF or TOW. These products can be processed by the spinners in grey form for yarn dyed/piece dyed outlets. The coarse range of deniers like 3.0, 2.0 and 1.4 and trilobal range are stock dyed and blended to get a wide range of colour combinations for suiting/furnishing fabrics.

## **Lustre**

At the polymerization stage delustrants like Titanium dioxide – TiO<sub>2</sub> are added to control the luster of the polymer. Based on TiO<sub>2</sub> addition, the luster of polymers are classified as under:

Semidull (SD) – Here a dosage of upto 0.3% of TiO<sub>2</sub> addition is done at polymerization stage. The SD polymer is preferred for apparel and other end uses where a subdued luster is desired.

Bright (BR) - The dosage of TiO<sub>2</sub> is limited to a maximum of 0.05% to make the polymer bright. Bright polymer is preferred for getting extra brightness in end uses like sewing threads or for modified cross section products like trilobal.

Standard (STD) - The dosage of TiO<sub>2</sub> for some PSF and Tow products is suitably adjusted keeping the end product requirements in view.

## **Cross Section**

The fibre cross section is dependent on the cross section of the spinnerette hole. The main types of cross sections offered are:

**Solid Round (Round)** - Polyester products spun in round cross section are preferred for a majority of end uses calling for a smooth surface.

**Hollow Round (HR)** - Round cross section with a hollow core gives a higher diameter for the same denier and hence higher bulk, particularly for filling end uses.

**Trilobal (TBL)** - This cross section is similar to cross-section of silk and imparts extra sparkle to yarns and fabrics manufactured. These products are generally stock dyed and blended in multi colours to get end products resembling worsted suiting a lower cost.

## **Tenacity**

The stress strain characteristics of the fibre can be modified by controlling the drawing operations and annealing of fibre. Broad categories of products offered are:

**Medium Tenacity (MT)** - The tenacity values will be upto 5 gpd with elongation values upto 60%. These products are generally suitable for coarse to medium count ranges.

**High Tenacity (HT)** - The tenacity values here will be higher with lower elongation. These products give higher strength in 100% PSF or blends and are available in the finer range of deniers capable of spinning stronger yarns in the medium to fine range of counts.

**Super High Tenacity (SHT)**- This range is offered in 1.2 denier to give very high strength desired in sewing threads. These products are also heat set to give low residual shrinkage.

## **Cut Length**

- Choice of cut length is dependent on the choice of blend components and capability of the drafting equipment on ring or air jet spinning machines.
- Mills equipped with short cradle systems can process 100% PSF, P/C or P/V blends using 40 mm cut length.

- For blending with short staple cottons with effective length less than 28 mm, PSF in 32 mm cut length may be used to get better yarn quality.
- Some mills use short cradle systems advantageously (better production) for processing 100% PSF or P/V blends using 44 mm cut length PSF/VSF.
- Mills with medium cradle systems generally use 44 mm or 51 mm cut length PSF/VSF to get higher productivity.
- Open end spinning systems – the preference is 32 mm cut length in finer deniers for spinning upto 30s count.

## **Denier**

A wide range of deniers is available to take care of a wide range of counts. The appropriate denier may be selected for the count range planned, based on

- type and condition of spinning equipment
- controls available on humidity conditions
- expectations of quality and productivity
- End use requirements

While multiple choice of deniers is indicated for a particular count range, better results in terms of quality, performance and productivity can be achieved by selecting the finer denier. The finer deniers call for better standards of processing equipment and better control of atmospheric conditions for better performance and quality.