

**General information:** Istrona® V is a registered trademark for mechanically crimped polypropylene staple fiber, based on polypropylene.

**The fiber is produced in the following types:** Istrona® V > standard, Istrona® V TPS > thermoplastic, Istrona® V BST > anti-microbial, Istrona® V LS > high UV stability, Istrona® V LSU > ultra-high UV stability, Istrona® V FR > reduced flammability, Istrona® V BD > for OE spinning, Istrona® V FDA > for food industry, Istrona® V HT > high tenacity, Istrona® V HTS > super high tenacity

### Basic characteristics:

The polypropylene staple fiber Istrona® V is produced and supplied in raw-white or spun-dyed in a wide range of colors according to the current sample card or a mutual agreed sample. The fiber has a circular cross section and its surface is treated with a proper hydrophobic or hydrophilic lubrication which positively affects its further treatment. The PP staple fiber is resistant to acids, alkalis, oil and other chemicals. When compared with other synthetic fibers it absorbs very little water (less than 0,1 % at 20 °C and 65 % relative air humidity). As a result dirt particles do not penetrate into the fiber and can easily be removed from the surface. The fiber does not dissolve in any solvent at the room temperature. The softening point of the fiber is 140 °C and melting point is 165 °C. It is resistant to microorganisms and moulds and does not provoke any allergic reactions. The PP fiber has the lowest specific gravity (0,91 g/cm<sup>3</sup>) of all types of synthetic fibers.

Properties:	Denier dtex	Cut Length mm	Strength cN/dtex min.	Elongation % min.	Crimps per 10 mm	Content of preparation %
Istrona® V	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,3 – 0,7
Istrona® V BD	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,2 – 0,7
Istrona® V FR	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,3 – 0,7
Istrona® V TPS	3,3/3,9/4,5/6,7/8,8	38 – 150	2,0	220	min. 4	0,3 – 0,7
Istrona® V BST	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,3 – 0,7
Istrona® V LS	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,3 – 0,7
Istrona® V LSU	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,3 – 0,7
Istrona® V FDA	3,3/3,9/4,5/6,7/8,8	38 – 150	3,3	50	min. 4	0,3 – 0,7
Istrona® V HT	3,3/3,9/4,5/6,7	60 – 90	4,5	40-60	min. 4	0,3 – 0,7
Istrona® V HTS	3,3/3,9/4,5/6,7	60 – 90	5,0	40-60	min. 4	0,3 – 0,7

### Main fields of application:

**Istrona® V, Istrona® V HT and V HTS** are designed for manufacturing of needle-punched carpets, non-woven textiles, worsted and semi-worsted yarns, and DREF yarns. The non-woven textiles in 100 % application, or in mixture with other fibers, are used for filtration, drainage, separation and reinforcement application in civil engineering, farming and in other technical areas. The 100 % yarns, or the yarns in mixture with other fibers, have a wide use in manufacture of upholstery, decoration and technical fabrics, as well as in production of floor coverings.

**Istrona® V BD** is designed mainly for use in the carded yarns processed by the technology of open-end spinning which are used for production of knitted and woven end products.

**Istrona® V FR** is staple fiber with a reduced flammability which contains a flame retardant. The limit oxygen value is minimum 36 vol. % and the path of destruction of the sample by flame with the vertically oriented textiles and fibers is maximum 5,5 cm. The fiber is used for production of floor coverings and non-woven technical textiles, where a reduced flammability of the material is required.

**Istrona® V TPS** is designed for production of thermal-bonded non-woven textiles. The chemical composition and the surface finish of PP staple fiber guarantees its harmlessness in contact with skin and mucous membranes, therefore it is suitable for medical and sanitary use.

**Istrona® V BST** has a very good bacteriostatic to biocidal effect, i. e. it prevents growth of a wide spectrum of the Staphylococcus Aureus and Escherichia Coli type bacterial strains. It is suitable for production of the textile materials, applied especially in the case of high risk of contamination of a large number of people, where the requirements for hygienic characteristics of these products are very high. The bacteriostatic efficiency, evaluated by the BNCM method, is minimum 50%. The main fields of application include filling materials for application in furniture manufacture, fillings for quilts and mattresses, insoles for sport shoes, filtration materials for air conditioning and treatment of drinking water, filtration materials for food applications in accordance with the WHO criteria, and floor coverings.

**Istrona® V LS and V LSU** are the staple fibers with high UV stability, designed for production of the textiles for outside use. The light stability is expressed as a half life time of the single fibre's tenacity. Conditions for determination of the light stability: Xenotest 450, BPT 40 °C, relative humidity of the air 50 %, day and night cycle. UV stability of LS staple fiber is min. 2 500 h and LSU staple fiber is min. 3 500 h.

**Istrona® V FDA** is designed for production of non-wovens and fabrics for filtration of liquids in the food industry. Because of its composition and surface treatment, the staple fiber is suitable for use for health reasons and therefore it complies with the food handling standards.

**Packing and storage:** The packing unit is one bale of staple fiber. The weight of one bale is approximately 220 - 250 kg, with the dimensions 1,2 x 1,0 x 0,75 m. Each bale is wrapped in a PE foil. The fiber is stored in a dry place, protected from atmospheric exposure.

The given data are only of an informative character and are not comprehensive. Further information can be obtained:

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