CLAIMS

[Claim 1]

A polyurethane elastic fiber comprising a multifilament, characterized by having, in a multifilament cross-section, a void part demarcated by the constituent individual filaments being in contact with one another, and by having a cross-sectional void area ratio of 15% to 60% as calculated according to the formula:

cross-sectional void area ratio (%) = (area of the void part / total cross-sectional area)×100,

where the total cross-sectional area is the sum of the area of the void part and the cross-sectional areas of all the individual filaments which constitute the multifilament,

wherein the fineness of the multifilament is not less than 150 dtex and not more than 1300 dtex, and

wherein the number of individual filaments constituting the multifilament is not less than 14 and not more than 140.

[Claim 2]

The polyurethane elastic fiber of claim 1, wherein the fineness of the multifilament is not less than 150 dtex and not more than 900 dtex.

[Claim 3]

The polyurethane elastic fiber of claim 1 or claim 2, wherein in the multifilament cross-section, there exists at least one void part bigger than an individual filament having a diameter equal to the average individual filament diameter calculated using all of the individual filaments constituting the multifilament.

[Claim 4]

The polyurethane elastic fiber of any one of claims 1 to 3, wherein an individual filament looseness occurrence rate is not more than 20% when an operation of extending a 40 mm-long multifilament to a length of 240 mm and then returning the multifilament to 40 mm again with a De Mattie tester is repeated 5000 times at a speed of 200 rpm.

[Claim 5]

The polyurethane elastic fiber of any one of claims 1 to 4, wherein the individual filament looseness occurrence rate is not more than 13%.

[Claim 6]

The polyurethane elastic fiber of any one of claims 1 to 5, wherein the content of long-chain aliphatic metal salts having 10 to 20 carbon atoms is 0 to 0.2 mass% relative to the weight of polyurethane elastic fiber.

[Claim 7]

A yarn package comprising the polyurethane elastic fiber of any one of claims 1 to 6.

[Claim 8]

The yarn package of claim 7, wherein the running stress in draft 3.0 is not less than 0.075 g/dtex and not more than 0.130 g/dtex.

[Claim 9]

A fabric comprising the polyurethane elastic fiber of any one of claims 1 to 6.

[Claim 10]

A gathered member formed by interposing the polyurethane elastic fiber of any one of claims 1 to 6 between non-woven cloths.

[Claim 11]

A gathered member comprising a polyurethane elastic fiber characterized by having, in the cross-section of polyurethane elastic fiber comprising a multifilament which is contained in the gathered member, a void part demarcated by the constituent individual filaments being in contact with one another, and by having a cross-sectional void area ratio of 15% to 60% as calculated according to the formula:

cross-sectional void area ratio (%) = (area of the void part / total cross-sectional area)×100,

where the total cross-sectional area is the sum of the area of the void part and the cross-sectional areas of all individual filaments that constitute the multifilament,

wherein the fineness of the multifilament is not less than 150 dtex and not more than 1300 dtex, and

wherein the number of individual filaments constituting the multifilament is not less than 14 and not more than 140.