(19) Europäisches Patentamt
European Patent Office
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(11) **EP 3 399 079 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
07.11.2018 Bulletin 2018/45

(51) Int Cl.:
D02G 3/02 *(2006.01)*

(21) Application number: **17382239.6**

(22) Date of filing: **03.05.2017**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

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(54) **TEXTILE YARN FOR VEHICLE FABRICS AND VEHICLE FABRIC WITH TEXTILE YARN**

(57) Textile yarn for vehicle fabrics and vehicle fabric with textile yarn, wherein the yarn is formed from staple fibres of bamboo viscose with a specific length and linear mass. Said textile yarn combines the good properties of natural fibre yarn and those of synthetic fibre yarn, as well as having good hygiene properties.

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Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates to a textile yarn for vehicle fabrics, specifically a yarn made from staple fibres of bamboo viscose.

[0002] The invention also relates to a vehicle fabric with textile yarn.

BACKGROUND OF THE INVENTION

[0003] Fabrics are an essential component in vehicles, used as a decorative covering for the various elements that cover the interior thereof.

[0004] Consequently, their presence in the interior of the vehicle is highly significant, due to the large area covered and accessibility to the user.

[0005] In addition, the vehicle sector is very demanding with regard to the requirements for the components thereof. Specifically, in the case of fabrics, as these are exposed and accessible, a number of appearance and feel requirements which must be maintained throughout the lifetime of the vehicle must be met. Otherwise, they would have a negative effect on the quality perceived by the vehicle user, with the resulting rejection of the fabric by the vehicle manufacturer.

[0006] The use of fabrics, whether knitted or woven, formed by synthetic fibres, natural fibres or artificial fibres, is known in the vehicle sector.

[0007] Synthetic fibres are manufactured by chemical processes and comprise materials such as polyester or polyamide.

[0008] Fabrics comprising yarn with this type of fibre are widely used in vehicle interiors and are characterized by having properties such as mechanical strength, resistance to abrasion, resistance to ultraviolet radiation, processability both of the yarn for manufacturing the fabric and of the fabric for the various applications in the vehicle interior.

[0009] However, fabrics comprising yarn made of synthetic fibres also have poor properties with regard to appearance, feel, hygiene, and user comfort, as they have poorer breathability, thermal comfort and antistatic properties.

[0010] Natural fibres are obtained from plants or animals and comprise materials such as wool and cotton.

[0011] Fabrics made with yarn of this type of fibre are seldom used in the vehicle interior although they present good properties with regard to appearance and feel, and are resistant to abrasion. In addition, they have good comfort, breathability, antistatic and thermal comfort properties.

[0012] However, fabrics comprising yarn made from natural fibres have poorer properties with regard to mechanical strength and resistance to ultraviolet radiation, such that in the vehicle interior they will deteriorate quickly, losing their feel and appearance. In addition, both the yarn used to make the fabric and the fabric used for vehicle interior applications are difficult to process, requiring special manufacturing processes with long cycle times that increase the cost of this type of fabric.

[0013] Finally, in an attempt to find a yarn for vehicle interior fabrics that combines the properties of natural and synthetic fibres, artificial fibres have been used. Artificial fibres are made from natural raw materials, mainly cellulose, subsequently treated by chemical processes such as the viscose process or the lyocell process in order to obtain, by these processes, viscose fibres.

[0014] This type of fabric provides good properties, mainly with regard to appearance, feel, comfort, breathability and antistatic properties, as well as processability of the fibre and the yarn. However, it has not been possible heretofore to obtain yarn from artificial fibres with good properties regarding mechanical strength, resistance to abrasion, resistance to ultraviolet radiation or hygiene properties.

[0015] Consequently, although these fabrics have a good appearance and feel and are easy to process, they eventually lose their appearance and feel over time, with the resulting detriment to the quality perceived by users, such that this type of fabric made from artificial fibres is not suitable for the interior of vehicles.

[0016] In view of the foregoing, the object of the invention consists in a textile yarn that comprises artificial fibres for fabrics of vehicles which combines the good properties of natural fibre yarn and those of synthetic fibre yarn, as well as having good hygiene properties.

DESCRIPTION OF THE INVENTION

[0017] The present invention is established and characterized in the independent claims, while the dependent claims describe additional characteristics thereof.

[0018] Firstly, forming a yarn made from artificial fibres obtained from bamboo cellulose allows achieving a fabric with good hygiene properties.

[0019] This is due to the particular chemical composition of bamboo, which contains antibacterial substances which the bamboo tree uses to defend itself from being attacked by insects and fungi.

[0020] In addition, said particular chemical composition affects the good antistatic properties of the yarn, as well as incorporating components that block the effect of ultraviolet radiation, increasing the strength of the yarn.

[0021] In addition, also directly related to the bamboo material of the fibres and particularly to its molecular structure, the fibres have a good mechanical strength as well as good elasticity and toughness.

[0022] On another hand, the length of the fibres forming the yarn, combined with their linear mass, provide a natural appearance and smooth feel of the fabric which increases the perception of quality by the vehicle user.

[0023] Moreover, said length combined with the linear mass of the fibre allow obtaining a breathable fabric, with the ensuing positive effect on the thermal comfort of the

fabric, an essential feature in the field of vehicle interiors.

[0024] In addition, the bamboo viscose material forming the fibres gives these a good stretchability, simplifying both the processing of the yarn to make the fabric and the processing of the fabric for the various applications in the vehicle interior, as this allows adaptation to complex shapes.

[0025] Also, the capillarity of the bamboo fibres, as they are a natural fibre, results in good thermal comfort properties of the fabrics made with bamboo fibre yarn.

[0026] Additionally, the special configuration of the bamboo viscose fabric, which has an outer casing that is stronger than the core of the fibre, provides good abrasion resistance to the yarn and therefore to the fabric comprising this yarn.

[0027] Optionally, the yarn comprises an intimate blend of bamboo viscose fibres and second fibres, allowing to enhance certain properties of the bamboo viscose staple fibres depending on the nature of said second fibres.

[0028] Specifically, if said second fibres are synthetic fibres, the enhanced properties include mechanical strength, toughness, abrasion resistance, resistance to ultraviolet radiation or processability of the yarn and the fabric.

[0029] Specifically, if said second fibres are natural fibres, properties are enhanced such as the appearance, feel, breathability, thermal comfort, antistatic properties, resistance to abrasion and resistance to high temperatures reached in some manufacturing processes for vehicle interior components.

[0030] Specifically, if said second fibres are artificial fibres, properties are enhanced such as appearance, feel, breathability, antistatic properties and processability due to the thermoplasticity of the fibres.

DETAILED DESCRIPTION OF THE INVENTION

[0031] The invention relates to a textile yarn for vehicle fabrics that comprises first staple fibres of bamboo viscose, with a length comprised between 10 mm and 50 mm and a linear mass comprised between 1 and 3 decitex.

[0032] Optionally, the textile yarn can comprise at least second staple fibres forming an intimate blend with the first staple fibres wherein the first fibres make up more than 50% by weight of said intimate blend.

[0033] The term 'intimate blend' is understood as a combination of at least two types of fibres in the yarn in order to combine the properties of each of the fibres in a single yarn.

[0034] Optionally, to facilitate achieving an intimate blend of the first staple fibres and the second staple fibres, the second staple fibres have a length comprised between 10 mm and 50 mm and a linear mass comprised between 1 and 3 decitex.

[0035] Said second fibres are selected from among the group of synthetic fibres, natural fibres and artificial fibres.

[0036] The synthetic fibres are selected from among the group of polyester, polyamide and elastane.

[0037] The natural fibres are selected from among the group of wool, linen and silk.

[0038] The artificial fibres are selected from among the group of viscose, such as eucalyptus viscose, for example.

[0039] The invention also relates to a vehicle fabric with textile yarn according to the chacteristics defined above.

Claims

1. Textile yarn for vehicle fabrics comprising first staple fibres of bamboo viscose with a length comprised between 10 mm and 50 mm and a linear mass comprised between 1 and 3 decitex.

2. Textile yarn for vehicle fabrics according to claim 1, also comprising second staple fibres forming an intimate blend with the first staple fibres, where the first fibres constitute more than 50% by weight of said intimate blend.

3. Textile yarn for vehicle fabrics according to claim 2, wherein the second fibres have a length comprised between 10 mm and 50 mm and a linear mass comprised between 1 and 3 decitex.

4. Textile yarn for vehicle fabrics according to claim 2, wherein the second fibres are synthetic fibres selected from among the group of polyester, polyamide and elastane.

5. Textile yarn for vehicle fabrics according to claim 2, wherein the second fibres are natural fibres selected from among the group of wool, linen and silk.

6. Textile yarn for vehicle fabrics according to claim 2, wherein the second fibres are artificial fibres selected from among the group of viscose.

7. Textile yarn for vehicle fabrics according to any of the preceding claims, wherein the textile yarn comprises first staple fibres of bamboo viscose with a length comprised between 10 mm and 50 mm and a linear mass comprised between 1 and 3 decitex.

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EUROPEAN SEARCH REPORT

Application Number
EP 17 38 2239

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	17 November 2017	Pollet, Didier

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EPO FORM 1503 03.82 (P04C01)

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TECHNICAL FIELDS SEARCHED (IPC)

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Munich	17 November 2017	Pollet, Didier

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