

New carpet materials

SPUN-DYED, CRIMPED POLYLACTIC ACID FIBER, METHOD FOR MANUFACTURE THEREOF, AND CARPET

EP1956120 (A1)

Publicatiedatum: 2008-08-13

SUMINOE TEXTILE [JP]

A spun-dyed textured polylacted filament yarn according to the present invention comprises a textured polylacted filament yarn, wherein the textured polylacted filament yarn includes a filament having an approximately circular or circular cross-section and has a relative viscosity of 2.5 to 3.8, wherein the textured polylacted filament yarn contains a coloring agent in an amount of 0.01 to 3 mass%, and wherein the textured polylacted filament yarn is 1.75 to 3.5 cN/dtex in tenacity, 35 to 60% in elongation, 500 to 3,500 dtex in total fineness, 2.5 to 25 dtex in a filament fineness, 2 to 8 % in hot water shrinkage ratio, and 5 to 25 % in dry heat crimp ratio. By employing the above structure, a spun-dyed textured polylacted filament yarn excellent in loftiness, toughness and abrasion resistance can be obtained.; It is preferable that the cross-section of the filament has a degree of deformation less than 1.5, the degree of deformation being expressed by a ratio (B/A) of a diameter B of an circumscribed circle of the filament cross-section to a diameter A of a inscribed circle of the filament cross-section.

CARPET FIBER POLYMERIC BLEND WO2008083035 (A1)

2008-07-10

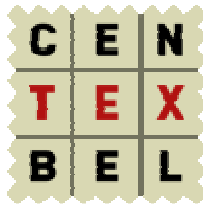
MOHAWK IND INC [US]; RODGERS JOHN A [US]; WILLIAMS JAMES L [US]; DHANRAJ JAIN [US]

The invention provides carpet fibers prepared from a blend of polymeric components, said fiber exhibiting improved properties, such as improved spinnability and improved fire resistance. The carpet fibers particularly comprise a majority of polytrimethylene terephthalate (PTT) and a minority of polyethylene terephthalate (PET). The invention further provides yarns and carpets prepared from the inventive fibers, said yarns and carpets likewise exhibiting improved properties. The invention also provides methods of improving various physical properties (such as fire resistance, spinnability, and elongation) of a polymeric composition.

BAMBOO FIBRE RASCHEL BLANKET MATERIAL AND PRODUCT THEREOF CN101205659 (A)

2008-06-25

ZHEJIANG TRUELOVE TEXTILE CO L [CN]



The invention relates to a bamboo fiber and other composition materials as well as a bamboo fiber Raschel carpet knitted by the bamboo fiber and the other composition materials; the compositions of the material by weight proportion are that: 20 to 80 portions of bamboo fiber, 120 to 200 portions of the other compositions, wherein, the other compositions are one or more types in cotton, nylon, polypropylene fiber, hemp, nitrilon, terylene and silk fiber.; The invention also provides the bamboo fiber Raschel carpet knitted by the raw material, the bamboo fiber and other veiling compositions are blended into the pile yarn used by the carpet, the polyester filament can be used as the chain stitch yarn and the inlay yarn of the carpet; the Raschel carpet produced by the material and the weaving process of the invention not only has the performance of smooth surface, softness, good heat insulation and ventilation property, quick moisture absorption and releasing, germproof and bacteriostasis, green environment protection and anti-ultraviolet radiation, but also has the property of natural mite prevention, deodorization, anti-insect, negative ion and so on as well as touch feeling of cashmere, polishing of silk fiber, air permeability and heat insulation of cotton,; the healthcare effect is ideal with a favorable compatibility on human skin, which is a natural green environment protection home-furnishing product.

METHOD FOR PROCESSING MODIFIED NYLON STAPLE 6 FIBRE

CN101135073 (A)

2008-03-05

YANGZHOU JINLUN CHEMICAL FIBRE [CN]

The process of producing modified Chinlon-6 staple fiber includes the following steps: mixing Chinlon-6 chips of 17500-20000 Da molecular weight and 0.2-0.25 wt% moisture content and heat resisting anticorrosive additive in the weight ratio of 18-20 to 1, melt spinning at 268-272 deg.c, and final drafting to obtain staple fiber. The heat resisting anticorrosive additive consists of Chinlon-6 chips, functional powder, dispersant and coupling agent. The modified Chinlon-6 staple fiber is endowed with high heat resistance, high wear resistance, high strength, high rebound elasticity, high chemical corrosion resistance and long service life. It is applied in weaving high grade carpet.

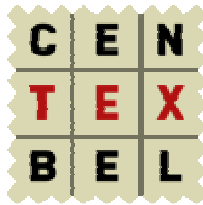
HIGH CRIMP BICOMPONENT FIBERS

WO2007035740 (A2)

2007-03-29

DU PONT [US]; KURIAN JOSEPH V [US]; FENYVESI GYORGYI [US]; SUNKARA HARI BABU [US]

A bicomponent fiber wherein (a) the first component comprises from about 90 to 100 wt.% poly(trimethylene terephthalate) and (b) the second component is a polymer composition comprising (i) poly(trimethylene terephthalate) and (ii) polymer containing polyalkylene ether repeating units. Yarn, fiber, fabrics and carpets comprising the bicomponent fiber, as well as the process of making the bicomponent fiber, yarn, fabric, and carpet.



OVERDYEABLE PIGMENTED POLYMERIC FIBER AND YARNS AND ARTICLES MADE THEREFROM

CA2498075 (A1)

2005-08-25

INVISTA TECH SARL [US]

Dyed yarns typically have inferior color fastness compared with pigmented yarns. However, dyeing offers a virtually infinite selection of colors, flexibility and more uniformity than constructions of pigmented yarns in residential carpet and other yarn applications, such as apparel. It has been found that relatively small amounts of pigment (10 to 1000 ppm) incorporated into polymeric fibers, and particularly nylon fibers used in carpets, creates lightly pigmented yarns which, when overdyed, are highly uniform and have a higher degree of apparent dye light fastness compared to normal dyed yarns. This effect is observable for both anionic and cationic polyamide polymers, and dyeing of these slightly pigmented yarns can be conducted to produce yarns of almost any color of greater depth than the base yarn.

POLYURETHANE CARPET BACKING SYSTEMS BASED ON NATURAL OIL POLYOLS AND POLYMER POLYOLS

WO2008127934 (A1)

2008-10-23

DOW GLOBAL TECHNOLOGIES INC [US]; JENKINES RANDALL C [US]

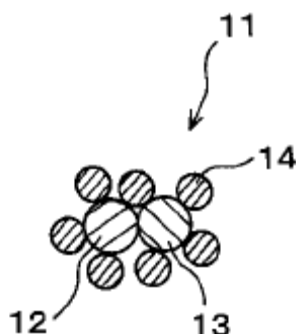
Polyurethane carpet backings are made from a polyurethane-forming composition that contains a mixture of at least one natural oil polyol and at least one polymer polyol. The resulting polyurethane carpet backings have good physical properties, in particular tensile and elongation.

CONJUGATE YARN, SOUNDPROOF CARPET AND FIBER PRODUCT

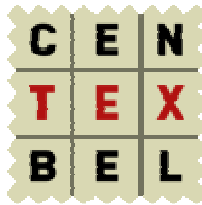
JP2007297721 (A)

2007-11-15

DAIWA KK; YACHIYO KK; SHOEI CO LTD



PROBLEM TO BE SOLVED: To provide a conjugate yarn, a soundproof carpet and fiber product each having sound absorbency, deodorizing property, anti-allergen property, antimicrobial property and antistatic property at the same time.; **SOLUTION:** In the conjugate yarn, a core part is constituted of a yarn containing a phthalocyanine fiber 12 and a yarn 13 containing a conductive fiber, and a sheath part is constituted of a yarn 14 composed of a natural fiber, a synthetic fiber, a semisynthetic fiber or a regenerated fiber around the core part.;

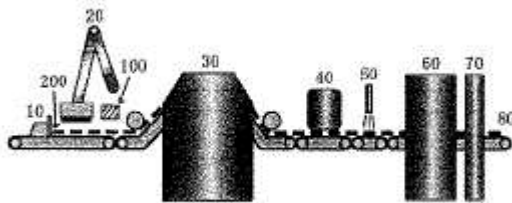


DECORATIVE MATERIAL AND METHOD FOR PRODUCING THE SAME

JP2006257586 (A)

2006-09-28

TOLI CORP; SHIGA TOLI CARPET KK



PROBLEM TO BE SOLVED: To provide a decorative material reducing at least one of problems in which fineness of expression and sharpness of a line are insufficient and a problem in which continuity of pattern is not obtained and deviation of pattern occurs and final touch feeling of pile is insufficient in the case of tile carpet and

preferably substantially solving these problems.; SOLUTION: In the decorative material composed of a chemical fiber, natural fiber or its combination, the fiber is at least partially thermally deformed by selectively heating a prescribed part of the fiber in non-contact state. The fiber forms, preferably, piles. The fiber is provided on a base fabric and a bucking material is formed on the surface opposite to the surface of the base fabric.; COPYRIGHT: (C)2006,JPO&NCIPI

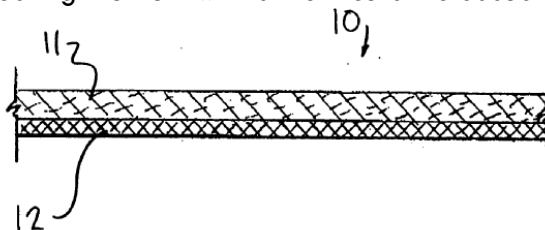
METHOD OF USING MULTI-CERAMIC BASED LIQUID INSULATION COMPOSITIONS AND TEXTILE PRODUCTS COATED WITH MULTI-CERAMIC BASED LIQUID INSULATION COMPOSITIONS

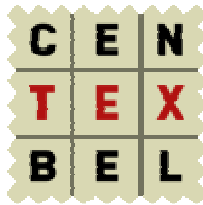
US2006179630 (A1)

2006-08-17

DAVIS J G [US]; LOFT ROBERT T [US]; SUMMEY SHALA W III [US]

A method of imparting fire-resistant properties, insulation properties, acoustic properties, and/or anti-microbial properties, and/or reducing static electricity propensity, to items including carpet, flooring and/or textile products including woven and/or non-woven products, synthetic products, and/or natural fiber products, includes coating the item with a multi-ceramic based liquid insulation composition.





POLYURETHANE CARPET BACKING SYSTEMS BASED ON NATURAL OIL POLYOLS AND POLYMER POLYOLS

WO2008127934 (A1)

2008-10-23

DOW GLOBAL TECHNOLOGIES INC [US]; JENKINES RANDALL C [US]

Polyurethane carpet backings are made from a polyurethane-forming composition that contains a mixture of at least one natural oil polyol and at least one polymer polyol. The resulting polyurethane carpet backings have good physical properties, in particular tensile and elongation.

POLYURETHANE CARPET BACKINGS MADE USING FATTY ACID AMIDE POLYOLS US2008241458 (A1)

2008-10-02

JENKINES RANDALL C [US]

Polyurethane carpet backings are made using a polyurethane-forming composition that includes fatty acid amide polyols. The formulation allows a significant replacement of conventional polyols with polyols derived from annually renewable resources, while maintaining important properties like edge curl, tuftbind, viscosity and curing rates.

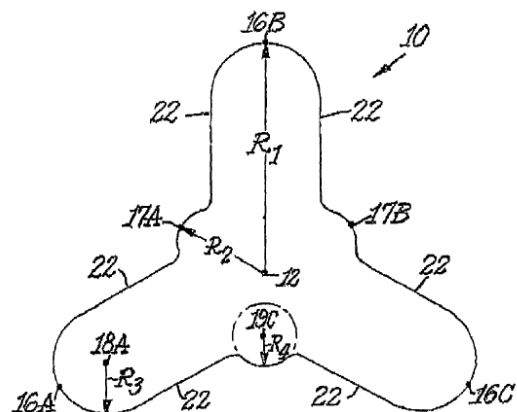
HEXALOBAL CROSS-SECTION FILAMENTS WITH THREE MAJOR LOBES AND THREE MINOR LOBES, CARPET TUFTED FROM YARN WITH SUCH FILAMENTS, AND CAPILLARY SPINNERET ORIFICE FOR PRODUCING SUCH FILAMENTS

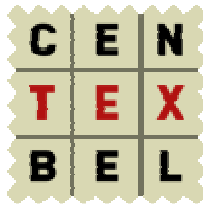
CA2630525 (A1)

2007-06-14

INVISTA NORTH AMERICA L S A R L [CH]

A filament comprising a synthetic polymer and characterized by a hexalobal cross-section having three major lobes and three minor lobes, and a major radius (R_1) and a minor radius (R_2). Each lobal cross-section having essentially straight side portions extending outwardly and tangent to a convex tip at each end. The ratio of the major radius (R_1) to the minor radius (R_2) defining an exterior modification ratio (R_1/R_2) of greater than (1).





HIGH CRIMP BICOMPONENT FIBERS

US2008143009 (A1)

2008-06-19

DU PONT

A bicomponent fiber wherein (a) the first component comprises from about 90 to 100 wt. % poly(trimethylene terephthalate) and (b) the second component is a polymer composition comprising (i) poly(trimethylene terephthalate) and (ii) polymer containing polyalkylene ether repeating units. Yarn, fiber, fabrics and carpets comprising the bicomponent fiber, as well as the process of making the bicomponent fiber, yarn, fabric, and carpet.

A NEW PROCESS OF MAKING PERMANENT ACID STAIN RESISTANCE FOR A LIGHTLY DYED POLYAMIDE CARPET

AU2006244547 (A1)

2006-11-16

INVISTA TECH SARL

The invention provides a process for making permanent stain resistant polyamide carpets with light color. The process comprises dyeing a low amine end and cationic dyeable polyamide carpet with acid dyes, and imparting stain resist compositions onto the carpet. In addition to stain resist compositions, a fluoro-chemical is also applied to improve soil resistance. The resulted carpet displays a built-in permanent anti-stain and anti-soil resistance after many shampoo-washes.

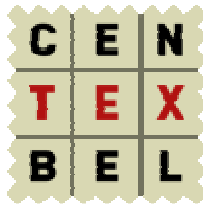
METHOD FOR SIMULATING A VISUAL IMAGE OF A THREAD AND/OR A FIBER PRODUCT MADE FROM THE THREAD, AS WELL AS A METHOD AND DEVICE FOR PRODUCING A BCF THREAD

WO2008017644 (A2)

2008-02-14

OERLIKON TEXTILE GMBH & CO KG [DE]; GOEDDERZ BJOERN [DE]; BRAUERS JOHANNES [DE]; AACH TIL [DE]

The invention relates to a method for simulating a visual image of a thread and/or a fiber product made of the thread, and a method and device for producing a multicolored BCF thread. In this method, the simulation is conveyed on the basis of at least one color parameter of a color additive to the thread and by production algorithms, taking into account the planned production of the thread and/or the fiber product, to generate a visual image of the thread and/or the fiber product. In order to allow the entire production chain, from the thread to the fiber product, to be taken into account in the simulation, a color spectrum of the color additive in the form of a granulate, a paste, or a liquid is measured out and added to a base polymer as a color parameter according to the invention. The thread is formed by melt spinning a number of filaments from the polymer melt.; During the production of a BCF thread in particular, the simulation of a visual image of the thread and/or a carpet can be



linked to the production process in such a way that at least one of the process parameters is selected and/or monitored, depending on the simulation result. Accordingly, a process control unit controlling the mechanisms of the device is linked to a simulation computer for data exchange.

3-DIMENSION CRIMP POLYETHYLENE-TEREPHTHALATE MULTIFILAMENT FOR CARPET

CN101054733 (A)
2007-10-17
HYOSUNG CORP [KR]

Disclosed is a 3-D crimp polyethylene terephthalate multifilament (BCF) having a stress-strain curve that (a) it elongates less than 5.0% when subjected to an initial stress 1.0 g/d, (b) it has an initial modulus of 20 to g/d, (c) it elongates at least 20% when subjected to a stress region of 1.0 to 2.5 g/d (d) it elongates from a tensile strength of at least 3.0 g/d to the tensile strength at break. BCF has improved physical properties such as excellent flame retardancy, high toughness, improved crimp uniformity and improved compressive elasticity modulus.

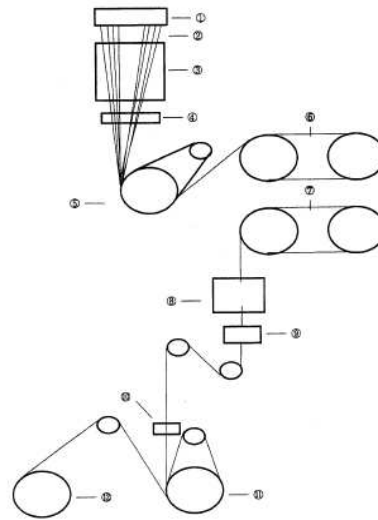


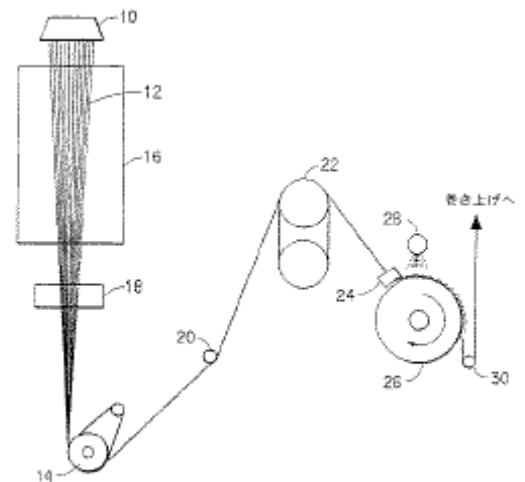
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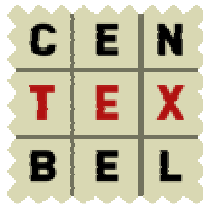
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POLY(TRIMETHYLENE TEREPHTHALATE) BULKED CONTINUOUS FILAMENT AND CARPET MADE THEREFROM

JP2006283273 (A)
2006-10-19
HOWELL JAMES MILTON; TUNG WAE-HAI; WERNY FRANK

PROBLEM TO BE SOLVED: To settle the problem that carpets made from filaments of poly(ethylene terephthalate) have poor crush resistance (also called pile height retention) and poor texture retention (i.e., the yarns in the tuft tips unravel with wear) and the carpets may develop a matted appearance in areas of high foot traffic.; SOLUTION: The carpets are produced by using yarns containing multiple bulked continuous filaments having random 3-dimensional curved crimps with irregular spaces, wherein the filaments are of poly(trimethylene terephthalate) having an intrinsic viscosity between 0.6 and 1.3 and have a total denier between





700 and 5,000, a denier per filament of 4 to 25, a boil off BCE (bundle crimp elongation) between 20% and 95% and a shrinkage from 0 to 5%.; COPYRIGHT: (C)2007,JPO&INPIT

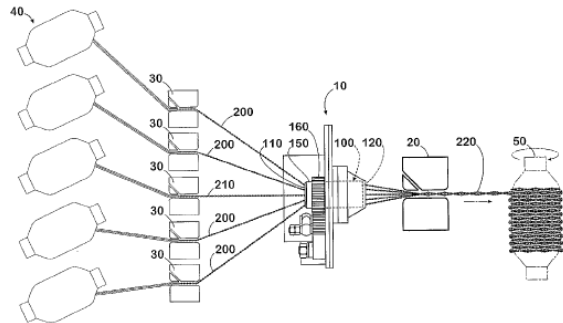
YARN MANUFACTURING APPARATUS AND METHOD

WO2006052252 (A1)

2006-05-18

SHAW IND GROUP INC [US]; KEITH KENNETH H [US]

The present invention is an apparatus and method of making yarn for carpet that exhibits a high degree of color pop. More specifically, in one aspect, the present invention comprises an apparatus and method that comprises supplying a plurality of yarns, false-twist the plurality of yarns, and passing the consolidated yarn through a downstream entangling assembly (20) to tack at least a portion of the consolidated yarn. Another aspect of the present invention passes at least one of the plurality of yarns through one of a plurality of second entangling assemblies (30) positioned upstream of the false-twist apparatus (10).



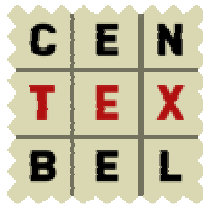
HIGH LUSTER FIBER MATERIALS, METHODS OF MANUFACTURE AND USES THEREOF

US2006040090 (A1)

2006-02-23

FRINK ROBERT A [US]; KIM DONG W [US]; HANGEY DALE A [US]

A plied carpet fiber material is disclosed herein that includes at least one nontextured fiber component plied with at least one additional fiber component to form the plied carpet fiber material, wherein each nontextured fiber component comprises a luster component. Plied carpet fiber materials are also disclosed herein that include: a) at least one nontextured fiber component, wherein each nontextured fiber component comprises a luster component, and b) at least one textured fiber component, wherein each textured fiber component comprises a luster component, wherein the at least one nontextured fiber component and the at least one textured fiber component are plied with one another to produce the plied carpet fiber material.; Plied carpet fiber materials are also disclosed herein that include: a) at least two nontextured fiber components, wherein each nontextured fiber component comprises a luster component, and wherein the at least two nontextured fiber components are plied together to form the plied carpet fiber material. Methods are also provided for producing a plied carpet fiber material that include: a) providing at least one nontextured fiber component, wherein each nontextured fiber component comprises a luster component;



b) providing at least one textured fiber component, wherein each textured fiber component comprises a luster component; and c) combining the at least one nontextured fiber component and the at least one textured fiber component to form the plied fiber material.

CARPET YARN DESENSITIZED TO VARIABLE AMBIENT ENVIRONMENTAL CONDITIONS AND METHODS AND SYSTEMS OF MAKING THE SAME

US2006022370 (A1)

2006-02-02

HONEYWELL INT INC [US]

Carpet yarn is provided which is significantly less sensitive to changing ambient environmental conditions. As such, the carpet yarns exhibit substantially uniform wet bulk properties across a wide range of ambient temperature and/or atmospheric moisture conditions so as to reduce significantly (if not eliminate entirely) visible streaks in carpets formed of such yarns. In especially preferred embodiments, the carpet yarns when made are subjected to a substantially higher draw ratio and a substantially higher precrimp temperature prior to being brought into contact with water supplied by means of a non-peristaltic, continuous pressure, steady stream pump. The resulting yarn moisture content is increased to a greater level as compared to conventional carpet yarns not possessing the environmental desensitization exhibited by the yarns of the present invention.

