

Title (en)

A 3-Dimensionally-knit fabric with bi-directional variation in thickness

Title (de)

DREIDIMENSIONAL GEWIRKTES GEWEBE MIT BIDIREKTIONALER DICKENVARIATION

Title (fr)

TEXTILE À MAILLES TRIDIMENSIONNELLES À VARIATION BIDIRECTIONNELLE D'ÉPAISSEUR

Publication

EP 4232624 A1 20230830 (EN)

Application

EP 21762824 A 20210824

Priority

- SG 10202010445Y A 20201021
- SG 2021050495 W 20210824

Abstract (en)

[origin: WO2022086439A1] Disclosed herein is a weft knit spacer fabric having variable thicknesses, the fabric formed from: a first surface layer formed from a first set of yarn; a second surface layer formed from a second set of yarn; and a set of spacer yarn between the first and second surface layer, where the fabric is formed from a plurality of courses of the sets of first, second and spacer yarns, where each course is connected to at least one other course in a wale direction, wherein the thickness is varied by varying one or both of: a density of tuck stitches along each course, where each tuck stitch is formed by the spacer yarn with the first and/or second surface layers; and a thickness of the set of spacer yarn in each course. The fabric is patterned to provide a free-standing 3-dimensional shape that has an internal volume defined by the surface of the first or second surface layer, and the first and second sets of yarns comprise an elastic material, provided that the fabric is a fabric that has not been subjected to a moulding step.

IPC 8 full level

D04B 1/10 (2006.01); **D04B 1/24** (2006.01)

CPC (source: EP US)

A41C 3/12 (2013.01 - US); **D04B 1/102** (2013.01 - US); **D04B 1/108** (2013.01 - EP US); **D04B 1/12** (2013.01 - EP US); **D04B 1/246** (2013.01 - EP US); **D10B 2401/041** (2013.01 - EP); **D10B 2403/021** (2013.01 - US); **D10B 2403/022** (2013.01 - EP US); **D10B 2501/02** (2013.01 - EP US)

Designated contracting state (EPC)

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 state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022086439 A1 20220428; EP 4232624 A1 20230830; US 2023392304 A1 20231207; WO 2022086438 A1 20220428

DOCDB simple family (application)

SG 2021050495 W 20210824; EP 21762824 A 20210824; SG 2021050494 W 20210824; US 202118249644 A 20210824