

Title (en)
TEXTILE ITEM OF CLOTHING EQUIPPED FOR BALLISTIC PROTECTION

Title (de)
TEXTILES BEKLEIDUNGSSTÜCK MIT EINER BALLISTISCHEN SCHUTZAUSRÜSTUNG

Title (fr)
ARTICLE VESTIMENTAIRE TEXTILE ÉQUIPÉ D'UNE PROTECTION BALISTIQUE

Publication
EP 3175199 B1 20190206 (DE)

Application
EP 15747122 A 20150727

Priority
• DE 102014110623 A 20140728
• EP 2015067140 W 20150727

Abstract (en)
[origin: CA2956580A1] The invention relates to a textile item of clothing (100, 200, 300, 400, 500, 600, 700, 800) equipped for ballistic protection. The textile item of clothing comprises a knitted fabric. Said knitted fabric has a plurality of differently protected zones (1, 1a, 2, 3, 3a). At least two different zones (1, 1a, 2, 3, 3a) are interconnected without a seam. According to the invention, at least one first zone (1) is formed from a yarn (5) that inhibits the penetration of fragments.

IPC 8 full level
F41H 1/02 (2006.01)

CPC (source: EP US)
A41B 1/08 (2013.01 - US); **A41B 9/00** (2013.01 - EP); **A41B 9/12** (2013.01 - US); **A41B 11/02** (2013.01 - US); **A41C 3/005** (2013.01 - US); **A41D 1/04** (2013.01 - US); **A41D 13/0007** (2013.01 - US); **A41D 13/0525** (2013.01 - EP); **A41D 19/01505** (2013.01 - US); **A41D 23/00** (2013.01 - US); **A41D 31/245** (2019.02 - EP US); **A42B 1/046** (2013.01 - US); **D04B 1/24** (2013.01 - EP); **F21S 45/33** (2018.01 - EP); **F21S 45/43** (2018.01 - EP); **F41H 1/02** (2013.01 - EP US); **A41B 9/06** (2013.01 - EP); **A41B 17/00** (2013.01 - EP); **A41B 2500/10** (2013.01 - EP); **A41D 31/24** (2019.02 - EP); **A41D 2200/20** (2013.01 - EP); **A41D 2500/10** (2013.01 - US); **D10B 2403/022** (2013.01 - EP); **D10B 2501/042** (2013.01 - EP)

Citation (opposition)
Opponent : Blücher GmbH (DE)
• WO 2014060094 A1 20140424 - FREIER KATRIN [DE]
• EP 2177119 A2 20100421 - HEXONIA GMBH [DE]
• US 2014201878 A1 20140724 - BALLESTEROS CASAS CAROLINA [CO]
• US 2012117700 A1 20120517 - HOWELL ANDREW RHYS [GB], et al
• GB 2493734 A 20130220 - BCB INT LTD [GB]
• DE 102012110104 A1 20140612 - BLUECHER GMBH [DE]
• US 6961958 B1 20051108 - SEITZINGER KYLE [US]
• US 8533863 B2
• WO 2011140487 A2 20111110 - WINDISCH THERESA A [US], et al
• WO 0045118 A2 20000803 - SAFARI LAND LTD INC [US], et al
• DE 102011055154 A1 20120510 - HESCH ROLF DIETER [CH]
• EP 2233621 A1 20100929 - KOBLEDER STRICKMODE GMBH & CO [AT], et al
• US 2007271965 A1 20071129 - KOLMES NATHANIEL [US], et al
• DE 19743074 A1 19990401 - STOLL & CO H [DE]
• US 6044493 A 20000404 - POST DAVID G [US]
• WO 2014084950 A2 20140605 - KOLMES MATTHEW [US], et al
• US 2004016043 A1 20040129 - UNO HIDEKAZU [JP], et al
• US 2007144221 A1 20070628 - SYTZ RONALD M [US]
• US 2010275341 A1 20101104 - SWEENEY SEAN [US], et al
• WO 2016005066 A1 20160114 - BLUECHER GMBH [DE]
• EP 3132227 B1 20180718 - BLUECHER GMBH [DE]
• WO 2010094368 A1 20100826 - BLUECHER GMBH [DE], et al
• US 2017227331 A1 20170810 - HEXELS GERD [DE]
• US 2017340038 A1 20171130 - THRELKELD JAMES O [US], et al
• US 2017176146 A1 20170622 - BÖHRINGER BERTRAM [DE], et al
• US 2017106622 A1 20170420 - BONIN ROBERT J [US]
• WO 2017005397 A1 20170112 - BLUECHER GMBH [DE]
• US 5619748 A 19970415 - NELSON JEFF S [US], et al
• "Aramide", WIKIPEDIA, 17 October 2019 (2019-10-17), XP055654828, Retrieved from the Internet <URL:https://de.wikipedia.org/wiki/Aramide>
• "Wirkerei und Stickerei - Technologische und Bindungstechnische Grundlagen", 2004, article KLAUS PETER WEBER ET AL.:
"Machenbildungsvorgänge", pages: 9 - 26, 75; 76, XP055654831
• "Elastan", WIKIPEDIA-EXZERPT, 17 August 2019 (2019-08-17), XP055654832, Retrieved from the Internet <URL:https://de.wikipedia.org/wiki/Elastan>
• "Spandex", XP055654838, Retrieved from the Internet <URL:https://www.stoff4you.de/stoff-lexikon/spandex>
• "VECTRAN - für anspruchsvollste Anwendungen", KURARAY, XP055654844, Retrieved from the Internet <URL:https://www.kuraray.eu/produkte/sortiment/vectran> [retrieved on 20190411]

Cited by
DE102020126113A1; WO2022073763A1

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

DOCDB simple family (publication)
DE 102014110623 A1 20160128; CA 2956580 A1 20160204; DE 202014010687 U1 20160518; DK 3175199 T3 20190506; DK 3388776 T3 20200602; DK 3480550 T3 20211011; EP 3175199 A1 20170607; EP 3175199 B1 20190206; EP 3388776 A1 20181017;

EP 3388776 B1 20200304; EP 3480550 A1 20190508; EP 3480550 B1 20210901; EP 3913316 A1 20211124; EP 3913316 B1 20240103;
EP 3913316 C0 20240103; ES 2723428 T3 20190827; ES 2794928 T3 20201119; ES 2897658 T3 20220302; PL 3175199 T3 20190830;
PL 3388776 T3 20201116; PL 3480550 T3 20220103; PL 3913316 T3 20240527; TR 201906128 T4 20190521; US 2017227331 A1 20170810;
WO 2016016183 A1 20160204

DOCDB simple family (application)

DE 102014110623 A 20140728; CA 2956580 A 20150727; DE 202014010687 U 20140728; DK 15747122 T 20150727;
DK 18176424 T 20150727; DK 18214075 T 20150727; EP 15747122 A 20150727; EP 18176424 A 20150727; EP 18214075 A 20150727;
EP 2015067140 W 20150727; EP 21184277 A 20150727; ES 15747122 T 20150727; ES 18176424 T 20150727; ES 18214075 T 20150727;
PL 15747122 T 20150727; PL 18176424 T 20150727; PL 18214075 T 20150727; PL 21184277 T 20150727; TR 201906128 T 20150727;
US 201515329373 A 20150727