

Title (en)  
BLOWABLE NATURAL DOWN ALTERNATIVE

Title (de)  
BLASBARE NATÜRLICH DAUNENALTERNATIVE

Title (fr)  
ALTERNATIVE AU DUVET NATUREL GONFLABLE

Publication  
**EP 3274494 A1 20180131 (EN)**

Application  
**EP 16718050 A 20160324**

Priority  
• US 201562138141 P 20150325  
• US 2016023956 W 20160324

Abstract (en)  
[origin: WO2016154402A1] A blend of polyester staple fibers and insulation fill materials useful as a replacement for natural down in articles such as outdoor apparel, sleeping bags, bedding, etc. The blend includes first, second and optionally third polyester staple fiber formats that differing in terms of average diameter. A length of substantially all the fibers of the blend is in the range of about 16 to about 63 mm, alternatively 20 - 40 mm. At least a majority of the fibers of the blend are opened. In some embodiments, some or substantially all of the fibers of the blend are crimped and/or include a lubricant (e.g., siliconized). One non-limiting example blend includes 20 - 30 weight percent of not greater than 1 Denier fibers, 20 - 30 weight percent of greater than 1 up to 2 Denier fibers, and 40 - 60 weight percent of greater than 2 Denier fibers.

IPC 8 full level  
**D04H 1/435** (2012.01); **A41D 31/00** (2006.01); **A41G 11/00** (2006.01); **B68G 1/00** (2006.01); **D04H 1/4391** (2012.01)

CPC (source: CN EP KR US)  
**B68G 7/06** (2013.01 - CN); **D04H 1/435** (2013.01 - CN EP KR US); **D04H 1/4391** (2013.01 - KR); **D04H 1/43914** (2020.05 - CN EP US); **D04H 1/43918** (2020.05 - CN EP US); **D04H 1/50** (2013.01 - KR US); **D04H 1/732** (2013.01 - KR US); **D06M 11/77** (2013.01 - KR US); **B68G 2001/005** (2013.01 - EP KR US); **D10B 2331/04** (2013.01 - KR US); **D10B 2501/04** (2013.01 - KR US); **D10B 2503/06** (2013.01 - KR US)

Citation (search report)  
See references of WO 2016154402A1

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DOCDB simple family (publication)  
**WO 2016154402 A1 20160929**; CN 107438681 A 20171205; CN 107438681 B 20231222; EP 3274494 A1 20180131; EP 3274494 B1 20211222; KR 20170130494 A 20171128; TW 201704572 A 20170201; TW I705165 B 20200921; US 2018051402 A1 20180222

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**US 2016023956 W 20160324**; CN 201680017801 A 20160324; EP 16718050 A 20160324; KR 20177030156 A 20160324; TW 105109323 A 20160324; US 201615559113 A 20160324