Title (en)

THIN INSULATIVE MATERIAL WITH GAS-FILLED CELLULAR STRUCTURE

Title (de)

DÜNNES ISOLIERMATERIAL MIT GASGEFÜLLTER ZELLSTRUKTUR

Title (fr)

MATERIAU D'ISOLATION MINCE POSSEDANT UNE STRUCTURE CELLULAIRE REMPLIE DE GAZ

Publication

EP 2136989 A4 20160120 (EN)

Application

EP 08744895 A 20080402

Priority

- US 2008059078 W 20080402
- US 91048507 P 20070406
- US 1332608 A 20080111
- US 3875208 P 20080322

Abstract (en)

[origin: WO2008124414A1] The present invention is directed to a lightweight, gas-filled, highly insulative cellular structure and methods for manufacturing the cellular structure. The cellular structure can be incorporated into outdoor gear and apparel to make the outdoor gear or apparel warm, while still maintaining a desired thinness and flexibility. The insulative article takes advantage of the superior insulative properties of dry gases and preferably highly insulative gasses such as argon. In addition, the size and shape of the cells in the cellular structure are selected to minimize convection.

IPC 8 full level

A41D 31/00 (2006.01); **A41D 31/02** (2006.01); **B32B 3/10** (2006.01); **B32B 5/02** (2006.01); **B32B 27/00** (2006.01); A41D 13/00 (2006.01)

CPC (source: EP)

A41D 31/06 (2019.01); **B32B 3/10** (2013.01); **B32B 5/02** (2013.01); **B32B 27/00** (2013.01); A41D 13/002 (2013.01); A41D 2400/14 (2013.01)

Citation (search report)

- [Y] US 4547906 A 19851022 - NISHIDA TAKESHI [JP], et al
- [Y] US 4808457 A 19890228 - KRUCK RICHARD W [US], et al
- [A] US 4242769 A 19810106 - RAYFIELD JOHN F, et al
- [A] WO 9302853 A1 19930218 - UNIV CALIFORNIA [US]
- See references of WO 2008124414A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2008124414 A1 20081016; CA 2682982 A1 20081016; EP 2136989 A1 20091230; EP 2136989 A4 20160120

DOCDB simple family (application)

US 2008059078 W 20080402; CA 2682982 A 20080402; EP 08744895 A 20080402