

Title (en)
PHASE CHANGE MATERIAL INSULATION FOR CONTAINERS

Title (de)
PHASENWECHSELMATERIALISOLIERUNG FÜR BEHÄLTER

Title (fr)
REVÊTEMENT CALORIFUGE PAR MATÉRIAU À CHANGEMENT DE PHASE POUR CONTENEURS

Publication
EP 4088070 A1 20221116 (EN)

Application
EP 21703569 A 20210108

Priority
• US 202062958361 P 20200108
• US 2021012658 W 20210108

Abstract (en)
[origin: US2021206565A1] Phase change materials (PCM) such as a liquid salt hydrate may be stored in capsules of various sizes and applied to fabrics and fibers to fabricate PCM features that provide passive temperature control for shipping containers and goods. In one implementation, PCM fabric covers may be placed over palletized cargo and over individual goods. Modular fabric pieces may be combined and interconnected to cover goods. Fabric covers may emphasize thermal performance over comfort or aesthetics when selecting microcapsule size and coating materials. In another implementation, PCM capsules may be combined with fiber filler, shaped as desired, and sealed within an exterior skin to produce rigid PCM panels having various shapes. Panels may be used to line interiors or exteriors of shipping containers or goods. Panels may be shaped to include contours that fit snugly against a desired surface, or to include interior portions in which goods can be fit into.

IPC 8 full level
F25D 3/06 (2006.01); **B65D 81/38** (2006.01)

CPC (source: EP US)
B65D 88/74 (2013.01 - US); **F25D 3/06** (2013.01 - EP); **B65D 88/14** (2013.01 - EP); **B65D 88/744** (2013.01 - EP); **B65D 90/48** (2013.01 - EP); **F25D 2201/1282** (2013.01 - EP); **F25D 2303/085** (2013.01 - EP)

Citation (search report)
See references of WO 2021142232A1

Designated contracting state (EPC)
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Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
US 2021206565 A1 20210708; CN 115244348 A 20221025; EP 4088070 A1 20221116; WO 2021142232 A1 20210715

DOCDB simple family (application)
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