

Title (en)

HIGH TEMPERATURE RESISTANT PERFORATED POLYMER COMPOSITE MATERIAL AND METHOD FOR MAKING SAME.

Title (de)

GELOCHTER POLYMERER VERBUNDWERKSTOFF DER HOHEN TEMPERATUREN WIDERSTEHT UND VERFAHREN ZU DESSEN HERSTELLUNG.

Title (fr)

MATERIAU COMPOSITE EN POLYMERES PERFORE RESISTANT A DES TEMPERATURES ELEVEES ET PROCEDE DE FABRICATION.

Publication

EP 0640036 A1 19950301 (EN)

Application

EP 93913791 A 19930426

Priority

- US 9304124 W 19930426
- US 87693292 A 19920501

Abstract (en)

[origin: WO9322128A1] A method for fabricating a perforated high temperature fiber reinforced polymer composite material which includes partially curing a polymer composite material to a viscoelastic state without inducing complete cure. The polymer composite material is formable when further heated, but does not experience excessive resin flow during final curing. According to the methods of the present invention, the polymer composite material may be perforated in the partially cured state, or prior to the partially cured state. A rigid pin mat apparatus of the present invention may advantageously be utilized to perforate the composite material. After the partial curing, the polymer composite material may be contoured utilizing a flexible mat pin apparatus of the present invention, or may be contoured utilizing forming tools generally known to the art. The method may advantageously be utilized with fiber-reinforced polymer composite starting materials, such as graphite/bismaleimide preimpregnated fabric, to produce perforated and contoured high temperature fiber reinforced polymer composite materials for sound suppression applications.

IPC 1-7

B29C 70/00; **B26F 1/02**; **B26F 1/16**; **B32B 3/24**; **B64C 1/40**; **E04B 1/82**

IPC 8 full level

B26F 1/02 (2006.01); **B26F 1/16** (2006.01); **B29C 33/00** (2006.01); **B29C 70/46** (2006.01); **B29C 70/54** (2006.01); **B32B 3/24** (2006.01); **B32B 38/04** (2006.01)

CPC (source: EP US)

B26F 1/02 (2013.01 - EP); **B26F 1/16** (2013.01 - EP); **B29C 33/0033** (2013.01 - EP); **B29C 70/46** (2013.01 - EP US); **B29C 70/545** (2013.01 - EP); **B32B 3/266** (2013.01 - EP US); **B32B 3/30** (2013.01 - US); **B32B 38/04** (2013.01 - EP US); **B29C 2793/0045** (2013.01 - EP); **B29K 2079/08** (2013.01 - EP); **B29K 2105/0809** (2013.01 - EP); **B29K 2105/24** (2013.01 - EP); **B29K 2105/243** (2013.01 - EP); **B29K 2307/00** (2013.01 - EP); **B32B 2038/047** (2013.01 - EP US); **B32B 2260/021** (2013.01 - US); **B32B 2260/046** (2013.01 - US); **B32B 2307/102** (2013.01 - US); **Y02T 50/40** (2013.01 - EP)

Citation (search report)

See references of WO 9322128A1

Designated contracting state (EPC)

DE FR GB IE IT

DOCDB simple family (publication)

WO 9322128 A1 19931111; EP 0640036 A1 19950301; TW 266186 B 19951221

DOCDB simple family (application)

US 9304124 W 19930426; EP 93913791 A 19930426; TW 82102463 A 19930402