

Title (en)  
REACTIVE CARRIERS FOR POLYMER MELT INJECTION

Title (de)  
REAKTIVE TRÄGER FÜR DIE POLYMERSCHMELZEINJEKTION

Title (fr)  
SUPPORTS REACTIFS POUR INJECTION PAR FUSION POLYMERIQUE

Publication  
**EP 1716206 A4 20080319 (EN)**

Application  
**EP 05712934 A 20050204**

Priority  
• US 77349004 A 20040206  
• US 2005003685 W 20050204

Abstract (en)  
[origin: CA2554228A1] The present invention concerns a reactive carrier that forms no by-products during melt injection of polymer into articles such as sheets, films, fibers and containers. The reactive carrier is used to mix additives into the polymer resin. More particularly, the invention relates to the use of one or more cyclic anhydrides or substituted cyclic anhydrides as the reactive carrier. The polymer can be polyester or polyamide. Suitable cyclic anhydrides are those with a melt point of less than the polyester or polyamide, preferably less than about 160 °C, and more preferably less than about 125 °C. Most preferable are cyclic anhydrides with a melt point less than about 100 °C and especially suitable are those that are liquid at room temperature (25 °C). The cyclic anhydride may be selected from the group of succinic anhydride, substituted succinic anhydride, glutaric anhydride, substituted glutaric anhydride, phthalic anhydride, substituted phthalic anhydride, maleic anhydride, substituted maleic anhydride, or mixtures of two or more of these.

IPC 8 full level  
**C08G 63/60** (2006.01)

CPC (source: EP KR US)  
**C08G 63/916** (2013.01 - EP US); **C08G 69/48** (2013.01 - EP US); **C08J 5/047** (2013.01 - EP US); **C08K 5/0008** (2013.01 - EP US); **C08K 5/15** (2013.01 - EP US); **C08L 33/24** (2013.01 - KR); **C08L 37/00** (2013.01 - KR); **C08L 67/00** (2013.01 - EP US); **C08L 67/02** (2013.01 - EP US); **C08L 73/00** (2013.01 - KR); **C08L 73/02** (2013.01 - KR); **D04H 1/425** (2013.01 - EP US); **D04H 1/4291** (2013.01 - EP US); **D04H 1/4334** (2013.01 - EP US); **D04H 1/435** (2013.01 - EP US); **D04H 1/43825** (2020.05 - EP US); **Y10T 428/237** (2015.01 - EP US)

Citation (search report)  
• [X] US 6342578 B1 20020129 - HUANG XIAOYAN [US]  
• [X] US 5693681 A 19971202 - PFAENDNER RUDOLF [DE], et al  
• [X] EP 0819716 A2 19980121 - SINCO ENG SPA [IT]  
• [X] US 5663029 A 19970902 - MALHOTRA SHADI L [CA]  
• [A] US 4361681 A 19821130 - BERNHARDT JOHN C  
• [X] DATABASE WPI Week 199842, Derwent World Patents Index; AN 1998-489525, XP002468737  
• [X] DATABASE WPI Week 199320, Derwent World Patents Index; AN 1993-162170, XP002468738 & JP H10212345 A 19980811 - TEIJIN LTD  
• See references of WO 2005076947A2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
BR PI0507336 A 20070703; CA 2554228 A1 20050825; EP 1716206 A2 20061102; EP 1716206 A4 20080319; JP 2007522295 A 20070809

DOCDB simple family (application)  
BR PI0507336 A 20050204; CA 2554228 A 20050204; EP 05712934 A 20050204; JP 2006552292 A 20050204