

Title (en)

PHOSPHORUS-MODIFIED EPOXY RESINS, PROCESS FOR PRODUCING THEM AND THEIR USE

Title (de)

PHOSPHORMODIFIZIERTE EPOXIDHARZE, VERFAHREN ZU IHRER HERSTELLUNG SOWIE DEREN VERWENDUNG

Title (fr)

RESINES EPOXY MODIFIEES PAR DU PHOSPHORE, PROCEDE POUR LEUR PRODUCTION ET LEUR UTILISATION

Publication

EP 0689560 A1 19960103 (DE)

Application

EP 94911874 A 19940310

Priority

- DE 4308184 A 19930315
- EP 9400749 W 19940310

Abstract (en)

[origin: US5648171A] PCT No. PCT/EP94/00750 Sec. 371 Date Sep. 14, 1995 Sec. 102(e) Date Sep. 14, 1995 PCT Filed Mar. 10, 1994 PCT Pub. No. WO94/21706 PCT Pub. Date Sep. 29, 1994Epoxy resin mixtures for producing prepregs and composites that are available at low cost and can be processed well yield flame-retardant molding materials even without the addition of flame retardants, and these molding materials have a high glass transition temperature and also have an improved interlaminar adhesion and adhesion to copper when they contain the following components: a phosphorus-modified epoxy resin with an epoxy value of 0.02 to 1 mol/100 g, composed of structural units derived from (A) polyepoxy compounds with at least two epoxy groups per molecule and (B) at least one compound from the group consisting of phosphinic acids, phosphonic acids, pyrophosphonic acids and phosphonic acid half-esters, and an aromatic polyamine as the hardener.

IPC 1-7

C08G 59/14; H05K 1/03

IPC 8 full level

B05D 7/24 (2006.01); **B29C 39/00** (2006.01); **B32B 27/38** (2006.01); **C08G 59/14** (2006.01); **C08G 59/18** (2006.01); **C08G 59/20** (2006.01); **C08G 59/30** (2006.01); **C08G 59/32** (2006.01); **C08G 59/40** (2006.01); **C08G 59/50** (2006.01); **C08J 5/24** (2006.01); **C08K 5/3477** (2006.01); **C08L 63/00** (2006.01); **C09D 163/00** (2006.01); **H01B 3/40** (2006.01); **H05K 1/03** (2006.01)

CPC (source: EP KR US)

C08G 59/14 (2013.01 - KR); **C08G 59/1422** (2013.01 - EP US); **C08G 59/1488** (2013.01 - EP US); **C08G 59/304** (2013.01 - EP US); **C08G 59/3254** (2013.01 - EP US); **C08G 59/508** (2013.01 - EP US); **C08G 59/5086** (2013.01 - EP US); **H01B 3/40** (2013.01 - EP US); **H05K 1/03** (2013.01 - KR); **H05K 1/0326** (2013.01 - EP US); **Y10S 428/901** (2013.01 - EP US); **Y10T 428/31511** (2015.04 - EP US); **Y10T 428/31518** (2015.04 - EP US); **Y10T 428/31525** (2015.04 - EP US)

Citation (search report)

See references of WO 9421705A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE

DOCDB simple family (publication)

US 5648171 A 19970715; AT E154369 T1 19970615; CA 2158362 A1 19940929; CA 2158366 A1 19940929; CN 1046949 C 19991201; CN 1119444 A 19960327; CN 1119447 A 19960327; CZ 224695 A3 19960117; CZ 240095 A3 19960117; CZ 287737 B6 20010117; DE 4340834 A1 19940922; DE 59403119 D1 19970717; EP 0689559 A1 19960103; EP 0689559 B1 19970611; EP 0689560 A1 19960103; FI 107612 B 20010914; FI 954292 A0 19950913; FI 954292 A 19950913; FI 954321 A0 19950914; FI 954321 A 19950914; HU 213902 B 19971128; HU 214671 B 19980428; HU 9502639 D0 19951128; HU 9502671 D0 19951128; HU T73149 A 19960628; HU T73868 A 19961028; JP H08507813 A 19960820; JP H08507814 A 19960820; KR 100304600 B1 20011122; KR 960701115 A 19960224; KR 960701118 A 19960224; PL 175777 B1 19990226; PL 176714 B1 19990730; PL 310629 A1 19951227; PL 310630 A1 19951227; RU 2116323 C1 19980727; RU 2126426 C1 19990220; TW 261622 B 19951101; TW 261623 B 19951101; WO 9421705 A1 19940929; WO 9421706 A1 19940929

DOCDB simple family (application)

US 52233395 A 19950914; AT 94911149 T 19940310; CA 2158362 A 19940310; CA 2158366 A 19940310; CN 94191463 A 19940310; CN 94191474 A 19940310; CZ 224695 A 19940310; CZ 240095 A 19940310; DE 4340834 A 19930315; DE 59403119 T 19940310; EP 9400749 W 19940310; EP 9400750 W 19940310; EP 94911149 A 19940310; EP 94911874 A 19940310; FI 954292 A 19950913; FI 954321 A 19950914; HU 9502639 A 19940310; HU 9502671 A 19940310; JP 52060694 A 19940310; JP 52060794 A 19940310; KR 19950703868 A 19950913; KR 19950703897 A 19950914; PL 31062994 A 19940310; PL 31063094 A 19940310; RU 95121641 A 19940310; RU 95121947 A 19940310; TW 83103560 A 19940421; TW 83103561 A 19940421