

Title (en)  
THERMALLY CURED UNDERLAYER FOR LITHOGRAPHIC APPLICATION

Title (de)  
THERMISCH GEHÄRTETE UNTERSCHICHT FÜR DIE LITHOGRAPHIE

Title (fr)  
SOUS-COUCHE DURCIE THERMIQUEMENT POUR APPLICATION LITHOGRAPHIQUE

Publication  
**EP 1373331 A4 20070117 (EN)**

Application  
**EP 02733834 A 20020307**

Priority  
• US 0207136 W 20020307  
• US 27552801 P 20010313

Abstract (en)  
[origin: WO02073307A2] Thermally cured undercoat for use in lithography of a thermally cured composition comprising a hydroxyl-containing polymer, an amino cross-linking agent and a thermal acid generator, wherein the hydroxyl containing polymer is a polymer comprising units m, n and o of the formula (I) wherein R<1> is H or methyl; R<2> is a substituted or unsubstituted C6-C14 aryl acrylate or C6-C14 aryl methacrylate group wherein the substituted groups may be phenyl, Cl-4 alkyl or C1-4 alkoxy; R<3> is a hydroxyl functionalized Cl-C8 alkyl acrylate, methacrylate or C6-C14 aryl group, R<4> is a C1-C10 linear or branched alkylene; p is an integer of from 1 to 5 with the proviso that there are no more than thirty carbon atoms in the [-R<4>O-]<sub>p</sub>; R<5> is a Cl-C10 linear, branched or cyclic alkyl, substituted or unsubstituted C6-Cl4 aryl, or substituted or unsubstituted C7-Cl5 alicyclic hydrocarbon; and m is about 40 to 70, n is about 15 to 35 and o is about 15 to 25.

IPC 8 full level  
**C08F 220/10** (2006.01); **G03F 7/09** (2006.01); **G03F 7/11** (2006.01); **H01L 21/027** (2006.01)

CPC (source: EP KR)  
**C08F 212/32** (2013.01 - KR); **G03F 7/091** (2013.01 - EP); **G03F 7/094** (2013.01 - EP)

Citation (search report)  
• [X] WO 0054105 A1 20000914 - ARCH SPEC CHEM INC [US]  
• [Y] JP H0539399 A 19930219 - NOK CORP  
• [A] EP 0292215 A2 19881123 - HITACHI CHEMICAL CO LTD [JP]  
• [A] EP 0813114 A2 19971217 - SHIPLEY CO LLC [US]  
• [E] EP 1211271 A1 20020605 - NIPPON SODA CO [JP]  
• [Y] DATABASE WPI Week 199320, Derwent World Patents Index; AN 1993-162141, XP002410588  
• See references of WO 02073307A2

Citation (examination)  
• EP 0987600 A1 20000322 - SHIPLEY CO LLC [US]  
• EP 0942331 A1 19990915 - CLARIANT INT LTD [CH]  
• EP 1211271 A1 20020605 - NIPPON SODA CO [JP]

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02073307 A2 20020919; WO 02073307 A3 20021121**; EP 1373331 A2 20040102; EP 1373331 A4 20070117; JP 2004534107 A 20041111; KR 100709330 B1 20070420; KR 20040024853 A 20040322; TW 574234 B 20040201

DOCDB simple family (application)  
**US 0207136 W 20020307**; EP 02733834 A 20020307; JP 2002572501 A 20020307; KR 20037011930 A 20030909; TW 91104609 A 20020312