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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
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TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
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(54) **Title:** MONOBENZOATE USEFUL AS A PLASTICIZER/COALESCENT IN POLYMERIC DISPERSIONS

(57) **Abstract:** A unique monobenzoate useful as a plasticizer or coalescent for polymeric dispersions, including without limitation architectural and other coatings., paints, OEM coatings, special purpose coatings overprint varnishes, inks, nail polish, floor polishes and the like. The monobenzoate comprises 3-phenyl propyl benzoate, a benzoate ester previously known as a flavoring and fragrance agent, but not previously utilized as a plasticizer or coalescent in polymeric applications. The inventive monobenzoate provides a suitable non- phthalate, lower VOC content alternative plasticizer or coalescent that is compatible with a wide variety of polymers.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 13/26083

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B05D 1/02; C08K 5/00 (2013.01)

USPC - 427/427.4; 524/292

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC: 427/427.4; 524/292;

IPC: B05D 1/02; C08K 5/00 (2013.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC: 427/427.4; 427/427.6; 427/427.7; 524/292; 524/284 ; 524/579; 524/522.; 524/93; 524/556 (see search words below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PATBASE: PGPB, USPT, USOC, EPAB, JPAB

Google: Scholar/Patents: 3-phenyl-propyl benzoate plasticizer VOC waterborne paint coalescent varnish ink waterborne resistance polymer dispersion acrylic styrene polyvinyl acetates pigment nail polish

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,762,230 B2 (BRANDERBURGER et al) 13 July 2004 (13.07.2004) Col 1,ln 45-59; Col 4,ln 63 to Col 5,ln 15 ;Col 6,ln 24-37;Col 7, ln 5-20; Col 9, Table 3b	1-14; 16
Y	US 5,728,760 A (ROSE et al) 17 March 1998 (17.03.1998) Col 2,ln 10-29; Col 2,ln 55-67; Col 3,ln 1-11; Col 4,ln 18-19	1-16
Y	US 2003/0092808 A1 (STANHOPE et al) 15 May 2003 (15.05.2003) para [0003];[0014];[0026];[0047];[0054]-[0058];[0081];[0089]; Claim 18	4-15
Y	US 5,965,111 A (ELLINGSON et al) 12 October 1999 (12.10.1999) Col 2, ln 5-10; Col 2, ln 26-34; Col 12, ln 59-62	15

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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