

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 September 2007 (27.09.2007)

PCT

(10) International Publication Number
WO 2007/109005 A3

(51) International Patent Classification:

C07F 9/02 (2006.01) C07F 9/144 (2006.01)
C07F 9/141 (2006.01) C07F 9/145 (2006.01)
C07F 9/142 (2006.01) C07F 9/6574 (2006.01)

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(21) International Application Number:

PCT/US2007/006242

(22) International Filing Date: 9 March 2007 (09.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/783,462 17 March 2006 (17.03.2006) US

(71) Applicant (for all designated States except US): INVISTA TECHNOLOGIES S.A. R.L. [LU/US]; Talstrasse 80, CH-8001 Zurich (CH).

(72) Inventor; and

(75) Inventor/Applicant (for US only): RITTER, Joachim, C. [DE/US]; 121 Broadbent Road, Wilmington, Delaware 19810 (US).

(74) Agent: FURR, Jr., Robert, B.; Three Little Falls Centre, 2801 Centerville Road, Wilmington, Delaware 19808 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

15 November 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR THE PURIFICATION OF TRIORGANOPHOSPHITES BY TREATMENT WITH A BASIC ADDITIVE

(57) Abstract: The invention provides a method for separating one or more triorganophosphite components from a crude phosphite mixture containing acidic hydrolysis products, the method comprising: contacting said crude phosphite mixture with a basic additive to produce a second mixture comprising a first phase and a second phase, wherein said first phase comprises the basic additive and one or more components independently selected from the group consisting of $(R^2O)(R^3O)POH$, $(R^1O)(HO)PO(H)$ and H_3PO_3 , wherein R^1 , R^2 and R^3 are independently selected from the group consisting of C_1 to C_{18} alkyl, C_6 to C_{18} aryl and hydroxyaryl, and C_3 to C_{18} cycloalkyl and hydroxyalkyl radicals, and wherein R^2 and R^3 can optionally be connected to each other directly by a chemical bond or through an intermediate divalent group R^9 ; and said second phase comprises one or more triorganophosphite components independently selected from the group consisting of $(R^4O)(R^5O)P(OR^6)$ and $((R^7O)(R^8O)PO)_nA$, wherein R^4 , R^5 , R^6 , R^7 and R^8 are independently selected from the group consisting of C_1 to C_{18} alkyl, C_6 to C_{18} aryl and C_3 to C_{18} cycloalkyl radicals, wherein each of R^4 , R^5 and R^6 can optionally be connected to one or both of the other two directly by a chemical bond or through an intermediate divalent group R^{10} , wherein R^7 and R^8 can optionally be connected to each other directly by a chemical bond or through an intermediate divalent group R^{11} , wherein A is an optionally substituted or unsubstituted aliphatic, aromatic or heteroaromatic radical, and wherein n is an integer greater than 1; and R^9 , R^{10} and R^{11} are independently selected from the group consisting of -O-, -S-, and -CH(R^{12})-, wherein R^{12} is selected from the group consisting of H, C_6 to C_{18} aryl, and C_1 to C_{18} alkyl.

WO 2007/109005 A3