



(43) International Publication Date
20 June 2013 (20.06.2013)

(10) International Publication Number
WO 2013/087501 A1

- (51) **International Patent Classification:**
C08K 5/28 (2006.01)
- (21) **International Application Number:**
PCT/EP2012/074632
- (22) **International Filing Date:**
6 December 2012 (06.12.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
11194156.3 16 December 2011 (16.12.2011) EP
- (71) **Applicant:** SOLVAY SPECIALTY POLYMERS ITALY S.p.A. [IT/IT]; Viale Lombardia, 20, I-20021 Bollate (MILANO) (IT).
- (72) **Inventors:** TORTELLI, Vito; 46 Viale Corsica, I-20137 Milano (IT). MARRANI, Alessio; 2 Vicolo fossato, I-23900 Lecco (IT). WLASSICS, Ivan; 86 Via Cavour, I-12075 Garesio (CN) (IT). FALCO, Ivan; 3 Via Pasubio, I-20018 Sedriano (MI) (IT).
- (74) **Agents:** BENVENUTI, Federica et al.; Rue de Ransbeek, 310, B-1120 Bruxelles (BE).

(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, 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, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, 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, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** CROSSLINKABLE COMPOSITIONS BASED ON VINYLIDENE FLUORIDE-TRIFLUOROETHYLENE POLYMERS

(57) **Abstract:** The present invention relates to crosslinkable compositions comprising vinylidene fluoride (VDF)/trifluoroethylene (TrFE) polymers and a fluorine-containing crosslinking agent of formula (A) [agent (Cz)]: $\{N_3[S(O)_{g1}]_{s1}\}_{na}-(R_H)_{nh}-R_f-(R'_H)_{nh'}-\{[S(O)_{g2}]_{s2}N_3\}_{na'}$ formula (A) wherein each of $g1$ and $g2$, equal to or different from each other, is 1 or 2, each of $s1$ and $s2$, equal to or different from each other, is 0 or 1, each of na and na' is independently zero or an integer of 1 to 3, provided that the sum $na+na'$ is at least 2, each of R_H and R'_H , equal to or different from each other, is a C_1 - C_{12} hydrocarbon group free of fluorine atoms, nh and nh' , equal to or different from each other are independently 0 or 1, and R_f is selected from the group consisting of i) a C_3 - C_{20} fluorocarbon group, possibly comprising one or more ethereal oxygen atoms, ii) an oligomer comprising copolymerized units of vinylidene fluoride and trifluoroethylene, to a process for the manufacture of said compositions, to a method for curing the same, and to the use of said copolymers in electrical and electronic devices.



WO 2013/087501 A1