

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

REVISED VERSION

(19) World Intellectual Property
Organization
International Bureau



WIPO | PCT



(10) International Publication Number
WO 2018/073182 A9

(43) International Publication Date
26 April 2018 (26.04.2018)

(51) International Patent Classification:

C08K 3/22 (2006.01) *C08L 31/04* (2006.01)
C08K 3/26 (2006.01) *C08K 9/04* (2006.01)
C08K 3/34 (2006.01) *C08L 23/08* (2006.01)

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(21) International Application Number:

PCT/EP2017/076368

(22) International Filing Date:

16 October 2017 (16.10.2017)

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

14 June 2018 (14.06.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/409,409 18 October 2016 (18.10.2016) US

(15) Information about Correction:

see Notice of 14 June 2018 (14.06.2018)

(71) Applicant: **MARTINSWERK GMBH** [DE/DE]; Kölner Strasse 110, 50127 Bergheim (DE).

(72) Inventors: **DIAR BAKERLY, Bashar**; Benfleetstr. 11, 50858 Cologne (DE). **MIES, Martijn Jacobus Marinus**; Sint Bernulphuslaan 4, 5643 PJ Eindhoven (NL). **DITTMAR, Thomas Olaf**; Berghauserstr. 3, D-50737 Cologne (DE).

(74) Agent: **MURGITROYD & COMPANY**; Scotland House, 165-169 Scotland Street, Glasgow Strathclyde G5 8PL (GB).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, 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, ST, 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, KM, ML, MR, NE, SN, TD, TG).

(54) Title: SYNERGISTIC FLAME RETARDANT COMPOSITIONS AND USES THEREOF IN POLYMER COMPOSITES

(57) Abstract: Flame retardant compositions containing an inorganic flame retardant, such as aluminum trihydrate or magnesium hydroxide, and a flame retardant synergist containing hydrotalcite and clay at a weight ratio of hydrotalcite:clay ranging from 1 : 1 to 100: 1, are disclosed. These flame retardant compositions can be used to produce polymer formulations with a unique balance of flame retardant, mechanical, and rheological properties.

WO 2018/073182 A9