

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
01 June 2023 (01.06.2023)



(10) International Publication Number
WO 2023/096576 A3

(51) International Patent Classification:

C08G 12/30 (2006.01) C09K 21/14 (2006.01)
C08G 12/40 (2006.01) C08L 79/04 (2006.01)

(21) International Application Number:

PCT/SG2022/050835

(22) International Filing Date:

17 November 2022 (17.11.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202113030Y 23 November 2021 (23.11.2021) SG

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(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, CV, CZ, DE, DJ, DK, DM,

DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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).

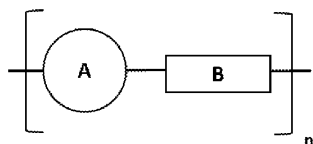
Published:

- 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))

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

31 August 2023 (31.08.2023)

(54) Title: POLYMERIC FLAME RETARDANT SYNERGIST AND THE METHOD OF PRODUCING IT AND ITS FORMULATION FOR POLYAMIDES



(57) Abstract: Herein disclosed is a flame retardant synergist comprising a repeating unit comprising a backbone represented by a formula of: wherein moiety A is derived from a substituted triazine having at least two amino groups, wherein moiety B is derived from a dialdehyde having a terminal aldehyde, wherein moiety A and moiety B are bonded via a -C-N- linkage formed from having one of the at least two amino groups reacted with the terminal aldehyde, wherein n ranges from 5 to 1000, and one or more side units extending from the backbone, wherein the one or more side units are derived from 9,10-dihydro-9-oxa-10-phosphaphenanthrene 10-oxide or a derivative thereof. A flame retardant polymer composite comprising a polymer, the flame retardant synergist, and a flame retardant additive, is also disclosed herein. Methods of forming the flame retardant synergist and the flame retardant polymer composite are further disclosed herein.

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