



(51) International Patent Classification:
C08G 77/60 (2006.01)

(21) International Application Number:
PCT/US2020/067194

(22) International Filing Date:
28 December 2020 (28.12.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
16/731,728 31 December 2019 (31.12.2019) US

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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, 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, IT, 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,

(54) Title: CURABLE FORMULATIONS FOR FORMING LOW-K DIELECTRIC SILICON-CONTAINING FILMS USING POLY-CARBOSILAZANE

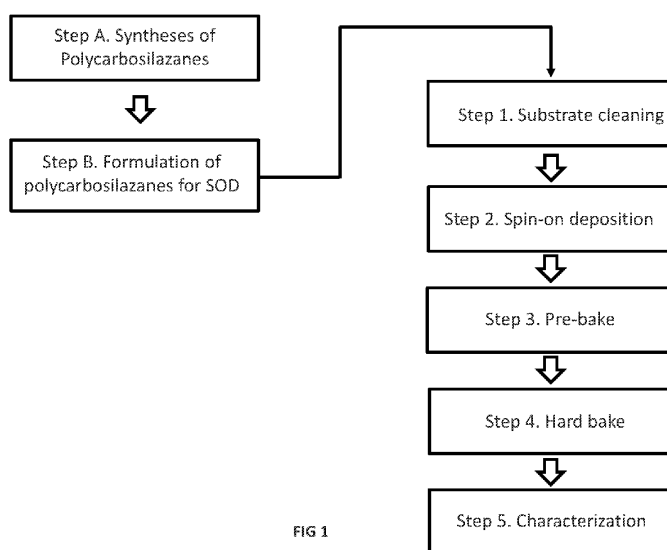


FIG 1

(57) Abstract: Disclosed are silicon and carbon containing film forming compositions comprising a polycarbosilazane polymer or oligomer formulation that consists of silazane-bridged carbosilane monomers, the carbosilane containing at least two $-\text{SiH}_2-$ moieties, either as terminal groups ($-\text{SiH}_3\text{R}$) or embedded in a carbosilane cyclic compound, wherein R is H, a $\text{C}_1\text{-C}_6$ linear, branched, or cyclic alkyl-group, a $\text{C}_1\text{-C}_6$ linear, branched, or cyclic alkenyl-group, or combination thereof. Also disclosed are methods of forming a silicon and carbon containing film comprising forming a solution comprising a polycarbosilazane polymer or oligomer formulation and contacting the solution with the substrate via a spin-on coating, spray coating, dip coating, or slit coating technique to form the silicon and carbon containing film.

[Continued on next page]

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, 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).

Published:

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