



(51) International Patent Classification:

A62D 1/00 (2006.01) *C09K 5/04* (2006.01)
C09K 3/30 (2006.01) *C08J 9/14* (2006.01)

(21) International Application Number:

PCT/US2014/059386

(22) International Filing Date:

7 October 2014 (07.10.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/888,155 8 October 2013 (08.10.2013) US

(71) Applicant: **E. I. DU PONT DE NEMOURS AND COMPANY** [US/US]; 1007 Market Street, Wilmington, Delaware 19898 (US).(72) Inventor: **ROBIN, Mark, L.**; 107 Saint Andrews Court, Middletown, Delaware 19709 (US).(74) Agent: **MALONEY, Daniel, Mark**; E. I. du Pont de Nemours and Company, Legal Patent Records Center, Chestnut Run Plaza 721/2340, 974 Centre Road, PO Box 2915 Wilmington, Delaware 19805 (US).

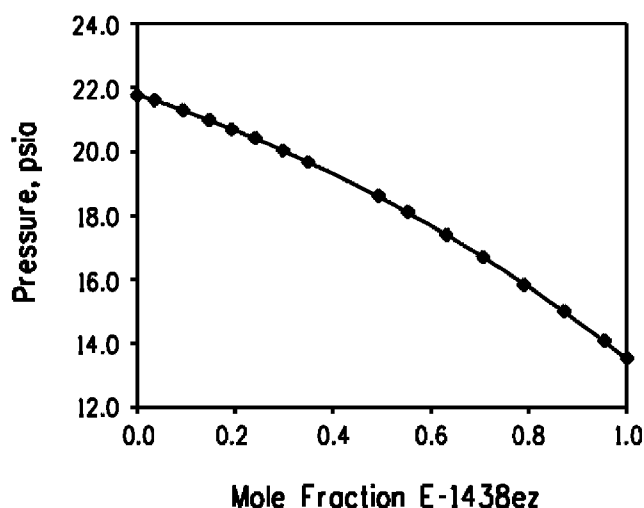
(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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).

Published:

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

(54) **Title:** AZEOTROPE-LIKE COMPOSITIONS OF FO-E-1,3,4,4,4-PENTAFLUORO-3-TRIFLUOROMETHYL-1-BUTENE AND E-1-CHLORO-3,3,3-TRIFLUOROPROPENE AND USES THEREOF

**FIG. 1**

(57) **Abstract:** Azeotrope-like compositions are disclosed. The azeotrope-like compositions are mixtures of HFO-E-1,3,4,4,4-Pentafluoro-3-trifluoromethyl-1-butene and E-1-Chloro-3,3,3-trifluoropropene. Also disclosed is a process of preparing a thermoplastic or thermoset foam by using such azeotrope-like compositions as blowing agents. Also disclosed is a process of producing refrigeration by using such azeotrope-like compositions. Also disclosed is a process of using such azeotrope-like compositions as solvents. Also disclosed is a process of producing an aerosol product by using such azeotrope-like compositions. Also disclosed is a process of using such azeotrope-like compositions as heat transfer media. Also disclosed is a process of extinguishing or suppressing a fire by using such azeotrope-like compositions. Also disclosed is a process of using such azeotrope-like compositions as dielectrics.