

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 August 2007 (30.08.2007)

PCT

(10) International Publication Number
WO 2007/098152 A3

(51) International Patent Classification:
B32B 9/04 (2006.01) **F03B 3/12** (2006.01)

(21) International Application Number:
PCT/US2007/004355

(22) International Filing Date:
20 February 2007 (20.02.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/775,206 20 February 2006 (20.02.2006) US
60/775,209 20 February 2006 (20.02.2006) US
60/775,208 20 February 2006 (20.02.2006) US

(71) Applicant and

(72) Inventor: **LEE, Kang, N.** [US/US]; 3897 Verdure Lane,
Zionsville, IN 46077 (US).

(74) Agents: **ALLIE, John, H.** et al.; Krieg Devault LLP, One
Indiana Square, Suite 2800, Indianapolis, IN 46204 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
3 April 2008

(54) Title: ARTICLE INCLUDING ENVIROMENTAL BARRIER COATING SYSTEM

(57) Abstract: An enhanced environmental barrier coating for a silicon containing substrate. The enhanced barrier coating may include a bond coat doped with at least one of an alkali metal oxide and an alkali earth metal oxide. The enhanced barrier coating may include a composite mullite bond coat including BSAS and another distinct second phase oxide applied over said surface.



WO 2007/098152 A3