

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 August 2004 (19.08.2004)

PCT

(10) International Publication Number
WO 2004/069901 A3

(51) International Patent Classification⁷: **B32B 5/16**, C09D
201/08, C08L 91/06, 93/00

(21) International Application Number:
PCT/US2004/002926

(22) International Filing Date: 31 January 2004 (31.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/444,897 4 February 2003 (04.02.2003) US

(71) Applicant: **NOVA CHEMICALS INC.** [US/US]; West-
pointe Center, 1550 Coraopolis Heights Road, Moon Town-
ship, PA 15108 (US).

(72) Inventors: **TANG, Jiansheng**; 3005 Salisbury Court,
Mars, PA 16046 (US). **COWAN, David, Allen**; 148
Aberdeen Drive, Cranberry Township, PA 16066 (US).
PIISPANEN, Dennis, H.; 94 Brian Drive, Beaver, PA
15009 (US). **WILLIAMS, Michael, T.**; 112 Pinebrook
Drive, Beaver Falls, PA 15010 (US).

(74) Agent: **KIKEL, Suzanne**; Nova Chemicals Inc., 400
Frankfort Road, Monaca, PA 15061 (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, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, 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
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
12 May 2005

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: COATING COMPOSITION FOR THERMOPLASTIC RESIN PARTICLES FOR FORMING FOAM CONTAINERS

(57) Abstract: Expandable or pre-expanded thermoplastic particles, e.g. polystyrene particles, used to form foam containers e.g. cups, bowls, are coated with a coating composition comprising a liquid part consisting of a) liquid polyethylene glycol with an average molecular weight of 200 to 800; and a solid part comprising components selected from the group consisting of b) polyolefin wax, e.g. polyethylene wax, c) a metal salt of higher fatty acids, e.g. zinc stearate or calcium stearate; d) polyethylene glycol with an average molecular weight of 900 to 10,000; and e) a fatty bisamide or fatty amide, e.g. ethylene bis-stearamide; and combinations of b) through e). The coating composition prevents or resists leakage of liquids and foods with oil and/or fatty components and improves the rim strength and ATF properties of foam containers.



WO 2004/069901 A3