

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 March 2005 (17.03.2005)

PCT

(10) International Publication Number
WO 2005/023543 A2

(51) International Patent Classification⁷: **B32B 31/00**,
B41M 5/00, C08G 18/08, C09D 175/04

(74) Agent: **MARMO, Carol A.**; PPG Industries, Inc., Intel-
lectual Property, One PPG Place, 39th Floor, Pittsburgh,
PA 15272 (US).

(21) International Application Number:
PCT/US2004/026892

(22) International Filing Date: 18 August 2004 (18.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/654,377 3 September 2003 (03.09.2003) US
10/654,433 3 September 2003 (03.09.2003) US
10/654,119 3 September 2003 (03.09.2003) 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, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(71) Applicant (*for all designated States except US*): **PPG
INDUSTRIES OHIO, INC.** [US/US]; 3800 West 143rd
Street, Cleveland, OH 44111 (US).

(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, IT, LU, 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).

(72) Inventors: **PARRINELLO, Luciano M.**; 2709 Cham-
plain Drive, Allison Park, PA 15101 (US). **ROGERS, Ran-
dall D.**; 438 Route 66, Apollo, PA 15613 (US). **HILL,
Charles T.**; 211 Lynn Drive, New Brighton, PA 15066
(US). **LIPKO, Larry E.**; 3 Lincoln Avenue, North Irwin,
PA 15642 (US). **BENENATI, Paul L.**; 519 Tulip Trail,
Wadsworth, OH 44281 (US). **NOWAKOWSKI, Peter M.**;
3130 Mohawk Drive, Gibsonsia, PA 15044 (US). **KOVACS,
Joseph P.**; 137 West Elm Crescent, The Woodlands, TX
77382 (US). **KAHLE, Charles, F. II**; 7025 Bennington
Woods Drive, Pittsburgh, PA 15237 (US).

Published:

— *without international search report and to be republished
upon receipt of that report*

*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: WATER RESISTANT INK JET PRINTABLE SHEET

(57) Abstract: A water resistant coating composition for ink jet recordable substrates having a pH of less than 7, which includes:
(a) an aqueous polyurethane dispersion; and (b) an aqueous solution of a nitrogen-containing polymeric dye fixative compound.
When applied to a suitable substrate, the coating composition allows for the recording of sharp, water-fast images. A coated ink jet
recordable substrate is also disclosed, which includes a substrate having at least one side and at least one side of the substrate has a
coating layer derived from the above described coating composition.



WO 2005/023543 A2