

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 December 2003 (11.12.2003)

PCT

(10) International Publication Number
WO 03/102048 A1

(51) International Patent Classification⁷: **C08G 69/48**,
69/44, C09D 177/12

(21) International Application Number: PCT/EP03/05413

(22) International Filing Date: 23 May 2003 (23.05.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02012053.1 31 May 2002 (31.05.2002) EP

(71) Applicant (for all designated States except US): **GRACE
GMBH & CO. KG** [DE/DE]; In der Hollerhecke 1, 67545
Worms (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **FLETCHER, Tim**
[US/DE]; Judengasse 9, 67547 Worms (DE).

(74) Agents: **VAN HEESCH, Helmut** et al.; Uexküll & Stol-
berg, Beselerstrasse 4, 22607 Hamburg (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, 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, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (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 patent (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

*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: POWDER COATING MATTING AGENT COMPRISING ESTER AMIDE CONDENSATION PRODUCT

(57) Abstract: The compounds of this invention are suitable matting agents for powder coatings. The compounds are ester amide-containing condensation products optionally comprising at least one β -hydroxyalkylamide functional group and, for example, are prepared from monomeric ester-amides, oligomeric polyester-amides or polymeric polyester-amides bearing β -hydroxyalkylamide groups by reacting the hydroxyalkylamide bearing ester amide with another compound such that at least one reactive functional group other than β -hydroxyalkylamide is also present on the condensation product, and further such that 50% or more of the terminal β -hydroxyalkylamide functionality has been reacted or converted to groups containing terminal carboxylic acid groups or other reactive groups including, but not limited to, groups reactive with polymers and crosslinkers suitable for preparing epoxy, epoxy-polyester, polyester, polyester acrylic, polyester-primid, polyurethane or acrylic powder coatings. Other embodiments of the invention comprise the combination of the aforementioned condensation product with inorganic solids such as silicas and aluminas, and/or matte activators.



WO 03/102048 A1