

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 August 2006 (24.08.2006)

PCT

(10) International Publication Number
WO 2006/087083 A3

(51) International Patent Classification:
C07C 45/52 (2006.01) C07C 47/22 (2006.01)

(21) International Application Number:
PCT/EP2006/000735

(22) International Filing Date: 6 January 2006 (06.01.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0501499 15 February 2005 (15.02.2005) FR
60/689,395 10 June 2005 (10.06.2005) US

(71) Applicant (for all designated States except US):
ARKEMA FRANCE [FR/FR]; 4-8, cours Michelet,
F-92800 Puteaux (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DUBOIS, Jean-Luc
[FR/FR]; 190, Rue du Coteau, F-69390 MILLERY (FR).
DUQUENNE, Christophe [FR/FR]; 8, rue d'Ailly,
F-80250 Chaussoy-Epagny (FR). HÖLDERLICH,
Wolfgang [DE/DE]; Mannheimer Strasse 18, 67227
Frankenthal (DE).

(74) Agent: BONNEL, Claudine; Arkema, Département
Propriété Industrielle, Cours Michelet - La Défense 10,
F-92091 Paris La Defense Cedex (FR).

(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, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
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, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

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:
28 December 2006

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: PROCESS FOR DEHYDRATING GLYCEROL TO ACROLEIN

(57) Abstract: The present invention relates to a process for manufacturing acrolein by dehydration of glycerol in the presence of molecular oxygen. The reaction is performed in the liquid phase or in the gas phase in the presence of a solid catalyst. The addition of oxygen makes it possible to obtain good glycerol conversion by inhibiting the deactivation of the catalyst and the formation of by-products.



WO 2006/087083 A3