

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 August 2007 (23.08.2007)

PCT

(10) International Publication Number
WO 2007/093358 A1

(51) International Patent Classification:

C07C 37/08 (2006.01) C07C 2/66 (2006.01)
C07C 39/04 (2006.01) C07C 15/02 (2006.01)
C07C 45/53 (2006.01) C07C 409/08 (2006.01)
C07C 49/10 (2006.01)

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(21) International Application Number:

PCT/EP2007/001206

(22) International Filing Date: 8 February 2007 (08.02.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/773,288 14 February 2006 (14.02.2006) US

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(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.

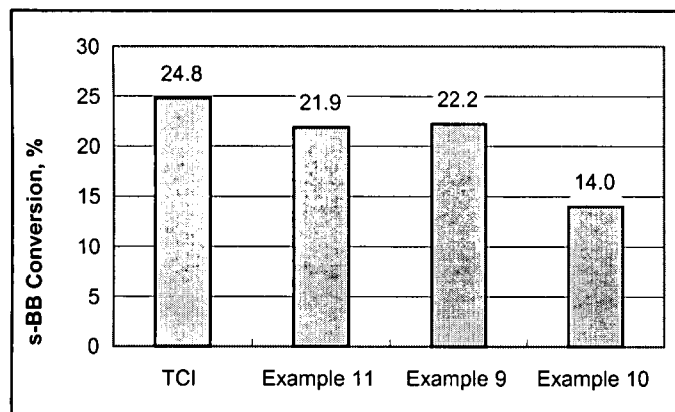
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, 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

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR PRODUCING PHENOL AND METHYL ETHYL KETONE



(57) Abstract: A process for producing phenol and methyl ethyl ketone comprises contacting benzene and a C₄ alkylating agent under alkylation conditions and in the presence of an alkylation catalyst comprising at least one molecular sieve of the MCM-22 family to produce an alkylation effluent comprising secbutylbenzene; wherein the contacting is conducted in a plurality of reaction zones and the C₄ alkylating agent is supplied to each of the reaction zones. A secbutylbenzene fraction is recovered from the alkylation effluent and comprises at least 95 wt% sec-butylbenzene, less than 100 wt ppm of C₈+ olefins, and less than 0.5 wt% of isobutylbenzene and tert-butylbenzene. The sec-butylbenzene fraction is then oxidized to produce sec-butylbenzene hydroperoxide and the hydroperoxide is cleaved to produce

phenol and methyl ethyl ketone.