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(21) International Application Number: PCT/NL99/00080 (22) International Filing Date: 16 February 1999 (16.02.99) (30) Priority Data: 98200520.9 18 February 1998 (18.02.98) EP (71) Applicants (for all designated States except US): DSM N.V. [NL/NL]; Het Overloon 1, NL-6411 TE Heerlen (NL). E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): GUIT, Rudolf, Philippus, Maria [NL/NL]; Boviersdaal 12, NL-6228 GP Maastricht (NL). LANE, Samuel, Livingston [US/US]; 6435 Durango Drive, Beaumont, TX 77708 (US). (74) Agent: KLEIBORN, Paul, Erik; Octrooibureau DSM, P.O. Box 9, NL-6160 MA Geleen (NL).		(81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: PROCESS FOR THE PREPARATION OF ϵ -CAPROLACTAM		
(57) Abstract Process to prepare ϵ -caprolactam starting from a starting mixture containing a 6-aminocaproate ester, in which in a first step (1) the 6-aminocaproate ester is converted into 6-aminocaproic acid and 6-aminocaproamide by reaction with water in the presence of ammonia at a temperature of between 50 and 250 °C, with a separate or simultaneous removal of alcohol(s), and in a subsequent step (2) the 6-aminocaproic acid and 6-aminocaproamide are cyclized at an elevated temperature, wherein in step (1) the 6-aminocaproate ester is converted into 6-aminocaproic acid and 6-aminocaproamide in the presence of an amount higher than 2 wt.% and less than or equal to 25 wt.% NH ₃ (relative to the total amount of organic compounds, water and ammonia present in step (1)).		