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(54) Title: PROCESS FOR THE PREPARATION OF MELAMINE

(57) Abstract: The present invention relates to a non-catalytic process for the preparation of melamine comprising: a) reacting molten urea in a reaction section at a pressure of 4.5 to 15 MPa to produce a reaction mixture containing molten melamine and reaction off-gases; b) vaporizing the molten melamine in said reaction mixture in a vaporization section to produce a gaseous mixture comprising the vaporized melamine and the reaction off-gases at a pressure of 4.5 to 15 MPa; c) quenching the gaseous mixture obtained from step b) by contact with an aqueous ammonium carbamate solution; and d) isolating melamine; and to a combined process for the preparation of urea and melamine, wherein melamine is prepared in accordance to the above method wherein at least part of the concentrated aqueous ammonium carbamate solution is transferred to an urea plant as at least part of the feed stock, urea is prepared utilizing said concentrated aqueous carbamate solution and urea obtained from said preparation step is supplied in molten form to the reacting step a).

## INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. C07D251/62

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BEILSTEIN Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 95/01345 A (KEMIRA OY [FI]; TURUNEN ILKKA [FI]; OINAS PEKKA [FI]) 12 January 1995 (1995-01-12) cited in the application page 8, lines 13-24,31-34 - page 9, columns 5-9; claim 1	1-15
A	EP 1 054 006 A (DSM NV [NL]) 22 November 2000 (2000-11-22) cited in the application claim 1; example I	1-15
Y	WO 01/56999 A (DSM NV [NL]; WIT NORA ANNA DE [NL]; GULPERS ROB KASIMIER [NL]) 9 August 2001 (2001-08-09) cited in the application pages 4-5; claim 1; example I	1-15
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See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Information on patent family members

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