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(54) Title: PROCESSABLE INORGANIC AND ORGANIC POLYMER FORMULATIONS, METHODS OF PRODUCTION AND USES THEREOF

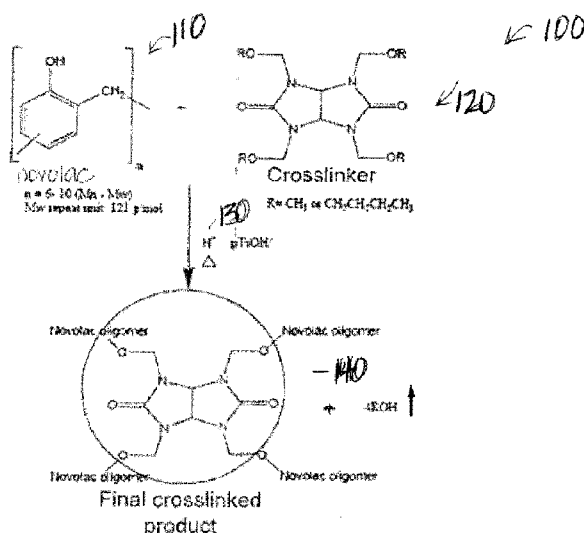


Figure 1

(57) Abstract: Polymer formulations are disclosed and described herein that comprise: at least one polymer comprising at least one hydroxy functional group, at least one acid source, and at least one acid-activated crosslinker that reacts with the polymer. In contemplated embodiments, these polymer formulations are curable at relatively low temperatures, as compared to those polymer formulations not comprising contemplated crosslinkers. Transparent films formed from these contemplated formulations are also disclosed. Organic transparent film compositions are also disclosed that comprise: at least one at least one phenol-based polymer, at least one solvent; at least one acid-activated crosslinker; and at least one acid source. Methods of forming organic transparent films with improved transmittance by depositing on a substrate the formulations disclosed herein and curing the formulations or compositions at a temperature of less than about 200°C. Inorganic transparent film compositions are disclosed that include: at least one silanol-based polymer, at least one solvent; at least one acid-activated crosslinker; and at least one acid source. Methods of forming inorganic transparent films are disclosed by depositing on a substrate the formulations disclosed herein and curing the formulations or compositions at a temperature of 200°C or less.

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## INTERNATIONAL SEARCH REPORT

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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)

IPC: C08L, C08J, C08K

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 practicable, search terms used)

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**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                  | Relevant to claim No. |
|-----------|-----------------------------------------------------------------------------------------------------|-----------------------|
| A         | US 2006-0035419 A (VICTOR LU et al.) 16 February 2006<br>See the whole document.                    | 1-17, 19-25           |
| A         | US 6602552 B1 (EDWARD J. EARASKEVICH et al.) 05 August 2003<br>See the whole document.              | 1-17, 19-25           |
| A         | US 2007-0197727 A (LAURA ANN LEWIN et al.) 23 August 2007<br>See the whole document.                | 1-17, 19-25           |
| A         | KR 10-2002-0095187 (HENKEL LOCTITE CORPORATION) 20 December 2002<br>See the whole document.         | 1-17, 19-25           |
| A         | KR 10-2006-0056368 A (CIBA SPECIALTY CHEMICALS HOLDING INC.) 24 May 2006<br>See the whole document. | 1-17, 19-25           |



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