Abstract

Processes of decreasing the melt flow rate of a polyester selected from the group consisting of polyesters derived from one or more dicarboxylic acids and one or more diols having more than two carbon atoms, copolyester thermoplastic elastomers, and mixtures of these, by melt mixing with the polyester an alkali metal salt having a molecular weight less than 300 to provide a melt mixed composition. Processes of making a melt extruded article from such melt mixed compositions and the articles made therefrom.
### INTERNATIONAL SEARCH REPORT

**PCT/US2011/026407**

**A. CLASSIFICATION OF SUBJECT MATTER**

*C08K 3/10(2006.01)i, C08J 5/00(2006.01)i, C08L 67/02(2006.01)i*

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)

*C08K 3/10; C08F 20/00, C08J 9/06, C08G 68/02; C08J 9/00*

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic database consulted during the international search (name of database and, where practicable, search terms used)

eKOMPASS (KIPO internal) & Keywords: PBT, copolyetherester, melt flow rate, viscosity, sodium carbonate, sodium benzoate.

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
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<tr>
<td>X</td>
<td>EP 0318788 A2 (GENERAL ELECTRIC COMPANY) 07 JUNE 1989 See pages 3-5, claims 1, 15, 19 and example 2.</td>
<td>14,15 1-7</td>
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<tr>
<td>A</td>
<td>US 6840164 B1 (DANIEL JOSEPH BRUNELLE et al.) 16 August 2005 See column 11, claims 1, 8, 10</td>
<td>14,15 1-7</td>
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<td>X</td>
<td>US 5026730 A (TYRELL; JOHN A. et al.) 25 June 1991 See columns 1, 2 and 5.</td>
<td>14,15 1-7</td>
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</table>

* Special categories of cited documents:
  * "A" document defining the general state of the art which is not considered to be of particular relevance
  * "E" earlier application or patent but published on or after the international filing date
  * "L" document which may throw doubts on priority claims(s) or which is cited to establish the publication date of citation or other special reason (as specified)
  * "O" document referring to an oral disclosure, use, exhibition or other means
  * "P" document published prior to the international filing date but later than the priority date claimed

**T** later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

**X** document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

**Y** document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

**&T** document member of the same patent family

**Date of the actual completion of the international search**

16 NOVEMBER 2011 (16.11.2011)

**Date of mailing of the international search report**

16 NOVEMBER 2011 (16.11.2011)

**Name and mailing address of the ISA/KR**

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

**Authorized officer**

KIM, Su Mi

**Telephone No.** 82-42-481-8132

Form PCT/ISA/210 (second sheet) (July 2009)
### Box No. II  Observations where certain claims were found unsearable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 10 because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

   The claim is dependent on claim which does not comply with PCT Rule 6.4(a), and thus the claim is not searchable.

3. ☒ Claims Nos.: 8, 9, 11-13 because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box No. III  Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invoice payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims, it is covered by claims Nos.:

**Remark on Protest**

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.
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<th>Publication date</th>
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<tr>
<td>EP 0313788 A2</td>
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<td>BR 8806378 A</td>
<td>22.08.1989</td>
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<td>EP 0318788 A3</td>
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<td></td>
<td>JP 1201361 A</td>
<td>14.08.1989</td>
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<td></td>
<td>TW 2008250642 A</td>
<td>15.07.2008</td>
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<td>US 2008-0161438 A1</td>
<td>03.07.2008</td>
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<td>25.06.1991</td>
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Form PCT/ISA/210 (patent family annex)  (July 2009)