(56) Classification:  
B29C 44/12 (2006.01)  B32B 17/02 (2006.01)

(51) Title: NON-PETROLEUM-BASED POLYURETHANE FOAM PRODUCTS HAVING IMPROVED PERFORMANCE SPECIFICATIONS AND METHOD OF PRODUCTION

(57) Abstract: A foam article, for use in a seat such as a seat cushion, includes an open cell, polyurethane foam material that includes a plant oil-based polyol material content greater than five percent and is produced from the reaction of a base polyol including at least a portion of a plant oil-based polyol, a copolymer polyol including at least a portion of a plant oil-based polyol, water, a cross-linking agent, and a surfactant that are reacted with an isocyanate material for producing the seat cushion having performance specifications that are equivalent or better than the performance characteristics for a traditional petroleum oil-based polyol material seat cushion.
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, MT, 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).  

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19 June 2008
INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 07/83073

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B29C 44/12; B32B 17/02 (2008.01)
USPC - 442/30; 264/46.4

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 (8) - B29C 44/12; B32B 17/02 (2008.01)
USPC - 442/30; 264/46.4

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 442/30; 264/46.4; 442/180, 442/221; 521/155

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PUBWEST (PGPB.USPT.USOCEPABJPAB) Terms - corn vegetable plant oil polyol cushion starch hydrolysis glycerol ethylene dextrose sorbitol glycerol xylitol
Google - corn-oil polyurethane foam cushion; corn starch hydrolysis glycerol; styrene acrylonitrile polyol

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.

X US 2006/0229375 A1 (HSIAO, ET AL) 12 Oct 2006 (12 10 2006), para [0002]-[0003], [0014]-[0015], [0024], [0027], [0014]-[0016], [0031], [0038], [0040], [0064], [0072]


Y US 4,950,695 A (STONE) 21 Aug 1990 (21.08.1990), abstract

Y APPA, para [0092]-[0093]

Y WO 2006/065345 A1 (BARTELINK, ET AL) 22 Jun 2006 (22 06 2006), pg 4, ln 22-25; pg 18, ln 14-16

D Further documents are listed in the continuation of Box C.

* 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 claim(s) or which is cited to establish the publication date of another 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
  "&" document member of the same patent family

Date of the actual completion of the international search
20 Feb 2008 (20.02.2008)

Date of mailing of the international search report
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