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(54) Title: BLOCK COPOLYMERS HAVING DISTINCT ISOPRENE AND BUTADIENE MIDBLOCKS, METHOD FOR MAKING SAME, AND USES FOR SUCH BLOCK COPOLYMERS

(57) Abstract: A block terpolymer for use in photocurable compositions, flexographic printing plates or hot melt adhesives having a molecular structure according to the general formula: A-I-B-I-A (1) or (A-I-B)_n-X (2), wherein each A is independently a polymer block of predominantly an aromatic vinyl compound, each I is predominantly isoprene, each B is predominantly butadiene, n is an integer equal to or greater than 2, and X is the residue of a coupling agent, and wherein: (a) the weight ratio of I to B is 30:70 to 70:30; (b) the aromatic vinyl compound content of the block copolymer is from about 14 to about 45 %; (c) the B block has a 1,2-vinyl bond content in the range of from about 20 to about 90 mol%; and (d) uncoupled triblock, S-I-B in the range of from about 2% to about 60%.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/73144

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C08L 47/00 (2009.01)

USPC - 522/113; 525/98

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)

USPC - 522/113; 525/98

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

USPC - 522/113,314; 525/98,88,314; 524/508

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

PubWEST (PGPB,USPT,OC,EPAB,JPAB); DialogPro (General Research); Google Patents
elastomer, block, copolymer, formula, structure, aromatic vinyl, polystyrene, isoprene, butadiene, residue, coupling agent, ratio, %, vinyl bond, MW, coupling efficiency, photocure, ethylenic, unsaturated, flexographic, printing, psa, adhesive

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 2005/0137312 A1 (DUBOIS) 23 June 2005 (23.06.2005), abstract, para [0001]-[0006], [0010]-[0022], [0030], [0038]-[0040], [0044], [0047], [0059] and Table 1 and 2.	1-6 and 22-24 ----- 7-21
Y	US 2004/0072951 A1 (HANSEN et al.) 15 April 2004 (15.04.2004), abstract, para [0003], [0006], [0007], [0011]-[0024], [0032]-[0034], [0037], [0040]-[0042], [0056]-[0070] and Table 3.	8-21
Y	US 2006/0070543 A1 (DE KEYZER et al.) 06 April 2006 (06.04.2006), abstract, para [0009], [0011]-[0015] and [0066].	7 and 18
A	US 2005/0233249 A1 (MULDERMANS et al.) 20 October 2005 (20.10.2005), abstract, para [0013]-[0021], [0028]-[0035], [0048]-[0054], [0066], and Table 2.	1-21
A	US 2006/0235133 A1 (SUZUKI et al.) 19 October 2006 (19.10.2006), entire document (defines vinyl bond content).	1-24
A	US 6,025,098 A (SAKURAI et al.) 15 February 2000 (15.02.2000), entire document.	1-24

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

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"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

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