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31 May 2012

(54) **Title:** ANTI-SETTLING COMPOSITIONS AND METHODS FOR USE

(57) **Abstract:** An anti-settling additive, compositions containing anti-settling additives and methods for use, the additive containing a monomer or polymer compound that contains at least one polymerizable functional group per molecule, and at least one bicycloheptyl-, bicycloheptenyl-, or branched (C₅-C₄₂)alkyl- polyether radical per molecule, wherein the bicycloheptyl- or bicycloheptenyl-polyether radical may optionally be substituted on one or more of the ring carbon atoms by one or two (C₁-C₆)alkyl groups per ring carbon atom is useful in making polymers.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/001357**A. CLASSIFICATION OF SUBJECT MATTER*****C09D 7/02(2006.01)i, C09D 201/00(2006.01)i, C09D 5/00(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)

C09D 7/02; C08F 220/60; C08F 220/06; C08K 3/26; C08F 220/38; C08F 8/44; C08F 20/06

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

eKOMPASS(KIPO internal) & Keywords: anti-settling, polymer, polyether, acid monomeric, nonionic monomeric

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2010-081944 A1 (IFP et al.) 22 July 2010 See abstract	1-24
A	US 05374687 A (COOPERMAN MURRAY C. et al.) 20 December 1994 See claims 1-13	1-24
A	US 2007-0287815 A1 (NICOLAS GAILLARD et al.) 13 December 2007 See claim 1	1-24
A	US 04591612 A (QUINN; ROBERT E.) 27 May 1986 See abstract	1-24



Further documents are listed in the continuation of Box C.



See patent family annex.

* 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

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"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

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Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010-081944 A1	22.07.2010	CA 2749900 A1	22.07.2010
US 05374687 A	20.12.1994	EP 0541477 A1	12.05.1993
		EP 0541477 B1	20.06.2001
		JP 07-034016 A	03.02.1995
		KR 10-0192620 B1	15.06.1999
US 2007-0287815 A1	13.12.2007	CA 2562996 A1	27.10.2005
		CN 1950406 C0	18.04.2007
		EP 1732960 A1	20.12.2006
		US 7700702 B2	20.04.2010
		WO 2005-100423 A1	27.10.2005
US 04591612 A	27.05.1986	CN 1003895 C0	14.11.1990
		EP 0214152 A1	18.03.1987
		EP 0401868 A3	13.03.1991
		EP 0401868 B1	17.04.1996
		WO 86-04597 A1	14.08.1986