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(54) Title: PROCESS FOR THE PREPARATION OF A POLYTHIOETHERSULFIDE

(57) Abstract: Process for the production of a mercapto-terminated liquid polymer with the formula HS-R-(S<sub>y</sub>-R)<sub>r</sub>-SH, wherein each R is independently selected from branched alkanediyl or branched arenediyl groups and groups with the structure -(CH<sub>2</sub>)<sub>p</sub>-O-(CH<sub>2</sub>)<sub>q</sub>-O-(CH<sub>2</sub>)<sub>r</sub>- and wherein 0-20% of the number or R-groups in the polymer are branched alkanediyl or branched arenediyl groups and 80-100% of the number or R-groups in the polymer have the structure -(CH<sub>2</sub>)<sub>p</sub>-O-(CH<sub>2</sub>)<sub>q</sub>-O-(CH<sub>2</sub>)<sub>r</sub>-, wherein t has a value in the range 1-60, y is an average value in the range 1.0-1.5, q is an integer the range 1 to 8, and p and r are integers the range 1-10. The resulting polymer has an improved ability of recovering its original shape after release from deforming compression forces and improved tendency to recover during the application of those forces



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**INTERNATIONAL SEARCH REPORT**

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. C08G75/12 C07C323/17 C08G75/14 C08G75/16  
 ADD.  
 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)  
 C08G

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)  
 EPO-Internal, CHEM ABS Data, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JORCZAK AND E M FETTES J S: "Polysulfide Liquid Polymers", INDUSTRIAL AND ENGINEERING CHEMISTRY, AMERICAN CHEMICAL SOCIETY, US, vol. 43, no. 2, 1 February 1951 (1951-02-01), pages 324-328, XP009107340, ISSN: 0019-7866, DOI: 10.1021/IE50494A022 page 324 - page 325	1-15
X	----- US 5 430 192 A (HOBBS STEVEN J [US] ET AL) 4 July 1995 (1995-07-04) example 2	1-15
X	----- GB 1 545 259 A (ELF AQUITAINE) 2 May 1979 (1979-05-02) example 1	1-8
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See patent family annex.

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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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Date of the actual completion of the international search  12 January 2015	Date of mailing of the international search report  26/01/2015
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  O'Sullivan, Timothy

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	WO 2012/139984 A1 (SHANGHAI ICI RES & DEV & MAN CO LTD [CN]; AKZO NOBEL CHEMICALS INT BV) 18 October 2012 (2012-10-18) claim 1; example 1 -----	1-15
A	WO 2011/113774 A1 (AKZO NOBEL CHEMICALS INT BV [NL]; VENDERBOSCH RUDOLF ANTHONIUS MARIA []) 22 September 2011 (2011-09-22) claim 1; example 1 -----	1-6

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Information on patent family members

International application No

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