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(54) Title: A FLAME-RETARDANT POLYMERIC COMPOSITION WITH LOW HALOGEN CONTENT, A CONCENTRATE OF SAID COMPOSITION, AND A METHOD FOR PREPARING SAID COMPOSITION

(57) Abstract: A flame-retardant polymeric composition comprising (i) a polymer; (ii) a triazine or a mixture of halogenated or non-halogenated triazines; (iii) a bismuth compound of formula Bi_zA_w where A is X, O, CO_3 , O_2CO_3 ; and (iv) a compound chosen between red phosphorus, a phosphorous compound or an organic compound capable of forming free radicals, in which the maximum content of halogen on the total of the components from (i) to (iv) in said composition is 1 wt%.



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INTERNATIONAL SEARCH REPORT

International Application No
 PCT/EP2004/008676

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C08K13/02 C08K3/22
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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 7 C08K

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 practical, search terms used)

EPO-Internal, PAJ, 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 Y	US 4 710 528 A (BERTELLI ET AL) 1 December 1987 (1987-12-01) column 1, line 43 - column 2, line 39 tables 2,4,5 claims 1-5	1-12, 15-19 13,14
Y	----- PATENT ABSTRACTS OF JAPAN vol. 017, no. 478 (C-1104), 31 August 1993 (1993-08-31) & JP 05 117485 A (ASAHI CHEM IND CO LTD), 14 May 1993 (1993-05-14) abstract -----	13,14

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Patent family members are listed in annex.

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4710528	A	01-12-1987	IT	1185558 B	12-11-1987
			AT	86271 T	15-03-1993
			AU	577688 B2	29-09-1988
			AU	5670886 A	06-11-1986
			BR	8601888 A	30-12-1986
			CA	1285341 C	25-06-1991
			DE	3687851 D1	08-04-1993
			DE	3687851 T2	26-08-1993
			EP	0200217 A2	05-11-1986
			ES	8801340 A1	01-03-1988
			JP	1959439 C	10-08-1995
			JP	6086545 B	02-11-1994
			JP	62000553 A	06-01-1987
<hr/>					
JP 05117485	A	14-05-1993	NONE		
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