



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/US93/08129 (22) International Filing Date: 27 August 1993 (27.08.93) (30) Priority data: 07/935,794 27 August 1992 (27.08.92) US 08/081,881 25 June 1993 (25.06.93) US (71) Applicant: CABOT CORPORATION [US/US]; 75 State Street, Boston, MA 02109-1806 (US). (72) Inventors: MACKAY, Bruce, E. ; 1 Summer Street, Framingham, MA 01701 (US). WILKINSON, Mark, A. ; 61 Harding Road, Lexington, MA 02173 (US). YATES, Barrie, J. ; 3 Butterfield Road, Lexington, MA 02173 (US).	(74) Agent: CHALETSKY, Lawrence, A.; Cabot Corporation, 157 Concord Road, Billerica, MA 01821 (US). (81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN; European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 21 July 1994 (21.07.94)	
(54) Title: CARBON BLACKS (57) Abstract Novel carbon blacks that impart advantageous properties to rubber and plastic compositions and may be utilized in place of lamp blacks, thermal carbon blacks and blends of carbon blacks. Also disclosed are novel rubber and plastic compositions incorporating the novel carbon blacks which exhibit advantageous combinations of compound processing and physical performance properties.		

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INTERNATIONAL SEARCH REPORT

Inter: nal Application No
PCT/US 93/08129

A. CLASSIFICATION OF SUBJECT MATTER
IPC 5 C09C1/50 C08K3/04

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 5 C09C 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 14, no. 137 (C-702)15 March 1990 & JP,A,02 011 664 (ASAHI CARBON) 16 January 1990	1, 2, 15
A	see abstract ---	3, 10, 16, 19
X	FR,A,2 064 877 (CONTINENTAL CARBON COMPANY) 23 July 1971	1-3
A	see table II ---	10
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

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- "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

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Date of the actual completion of the international search

17 May 1994

Date of mailing of the international search report

08.06.94

Name and mailing address of the ISA

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Van Bellingen, I

INTERNATIONAL SEARCH REPORT

International Application No

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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.
X	DATABASE WPI Week 8942, Derwent Publications Ltd., London, GB; AN 89-306640 & JP,A,1 229 074 (ASAHI CARBON) 12 September 1989	4-6,17
A	see abstract ---	3,7,10, 16,19
X	DATABASE WPI Week 9106, Derwent Publications Ltd., London, GB; AN 91-41095 & JP,A,2 308 835 (TOYO RUBBER IND.) 21 December 1990	1,2,15
A	see abstract ---	3,10-14, 16,19-23
P,X	WO,A,93 10194 (CABOT CORPORATION) 27 May 1993	10, 12-14, 19,21-23 1,2,11, 15,20
A	see claims 1,5; table 3 ---	
A	DATABASE WPI Week 9235, Derwent Publications Ltd., London, GB; AN 92-289009 & JP,A,4 198 273 (FUJIKURA) 17 July 1992 see abstract ---	1-23
A	DATABASE WPI Week 8516, Derwent Publications Ltd., London, GB; AN 85-095390 & JP,A,60 042 439 (TOKAI CARBON) 6 March 1985 see abstract ---	1,2, 10-15, 19-23
A	DATABASE WPI Week 9139, Derwent Publications Ltd., London, GB; AN 91-286149 & JP,A,3 190 945 (YOKOHAMA RUBBER) 20 August 1991 see abstract ---	11,14, 20,23
3 A	EP,A,0 020 889 (DEGUSSA) 7 January 1981 see claim 1 ---	11
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International Application No

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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.
A	US,A,3 961 902 (J. W. VANDERVEEN) 8 June 1976 see column 3, line 55 - line 62 ---	11
A	US,A,4 601 892 (C. J. HART ET AL.) 22 July 1986 see column 8, line 50 - line 53 -----	10

INTERNATIONAL SEARCH REPORT

International application No.

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

- | | |
|-------------------------------------|---------------------|
| 1. Claims 1,2,15 and 10 (partially) | 6. Claims 11 and 20 |
| 2. Claims 3,16 and 10 (partially) | 7. Claims 12 and 21 |
| 3. Claims 4-7,17 and 10 (partially) | 8. Claims 13 and 22 |
| 4. Claims 8,9 and 18 | 9. Claims 14 and 23 |
| 5. Claims 10 and 19 | |

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

 The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A-2064877	23-07-71	GB-A- 1304390 NL-A- 7012608	24-01-73 06-04-71
WO-A-9310194	27-05-93	US-A- 5229452 AU-A- 2917692	20-07-93 15-06-93
EP-A-0020889	07-01-81	DE-A- 2923642 JP-B- 1057703 JP-C- 1762984 JP-A- 56002356	18-12-80 07-12-89 28-05-93 12-01-81
US-A-3961902	08-06-76	US-A- 3865926	11-02-75
US-A-4601892	22-07-86	NONE	