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(54) Title: STABILIZED IODOCARBON COMPOSITIONS

(57) Abstract: Disclosed are compositions comprising at least one iodocarbon compound and preferably at least one stabilization agent comprising a diene-based compound. These compositions are generally useful as refrigerants for heating and cooling, as blowing agents, as aerosol propellants, as solvent composition, and as fire extinguishing and suppressing agents.



International application No PCT/US2005/046982

CLASSIFICATION OF SUBJECT MATTER ÎNV. C09K5/04 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) C09K 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, WPI Data, CHEM ABS Data, COMPENDEX C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. DATABASE WPI 1 - 5Α Section Ch, Week 199719 Derwent Publications Ltd., London, GB; Class E16, AN 1997-209616 XP002406831 & JP 09 059612 A (MATSUSHITA DENKI SANGYO KK) 4 March 1997 (1997-03-04) cited in the application χ abstract 50,51 US 5 380 449 A (THOMAS ET AL) 1 10 January 1995 (1995-01-10) cited in the application the whole document X Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: "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 "A" document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international "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 filing date *L¹ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such docudocument referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 20/12/2006 7 December 2006 Authorized officer Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Puetz, Christine

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International application No. PCT/US2005/046982

INTERNATIONAL SEARCH REPORT

Box II Observations where certain claims were found unsearchable (Continuation of item 2 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:
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 III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-29,49,64,65,81-84 and 66-80 (all in part)

heat transfer composition comprising an iodocarbon and a diene-based compound, an iodocarbon containing composition, a method for transferring heat, a method of stabilizing a composition and a blowing agent

2. claims: 30-48,54-63

heat transfer composition comprising a fluoroalkene of formula I (XCFzR3-z), a method of replacing an existing refrigerant, a foamable composition

3. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and difluoromethane (HFC-32)

4. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and pentafluoroethane (HFC-125) $\dot{}$

5. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and 1,1,2,2-tetrafluoroethane (HFC-134) or 1,1,1,2-tetrafluoroethane (HFC-134a)

6. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and difluoroethane (HFC-152)

7. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea)

8. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and 1,1,1,3,3,3-hexafluoropropane (HFC-236fa)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

9. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and 1,1,1,3,3-pentafluoropropane (HFC-245fa)

10. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and 1,1,1,3,3,3-hexafluorobutane (HFC-365mfc)

11. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and water

12. claims: 50-53,66-80 (all in part)

heat transfer composition comprising iodofluorocarbon and ${\tt CO2}$

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