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For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: THERMAL BARRIER COMPOSITION

(57) Abstract: The thermal barrier composition of the present invention provides a glassy matrix comprising an alkoxy-function-  
alized siloxane and a functionally-terminated silane or siloxane, polymethylsilsesquioxane dissolved in a crosslinking agent, and  
optionally a filler and/or hollow glass microspheres.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/10539

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B32B 9/04; C08G 77/08 77/18; C08K 3/20, 3/36; C08L 83/00

US CL : 428/447; 524/430,447,449,451; 525/477; 528/17,18,34;

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)

U.S. : 428/447; 524/430,447,449,451; 525/477; 528/17,18,34;

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)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,510,283 (TAKEDA et al.) 9 April 1985 (09.04.1985)	
A	JP 60-254034 A (FUJITSU LTD) 14 December 1985 (14.12.1985)	
A	US 5,492,730 (BALABA et al) 20 February 1996 (20.02.1996)	

☐ 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

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"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

15 March 2005 (15.03.2005)

Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/10539

## Box No. 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:
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 No. 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:

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

International application No.  
PCT/US04/10539

Continuation of B. FIELDS SEARCHED Item 3:  
EAST

search terms: silsesquioxane, cage/ladder/polyhedral polymer, polyorthosilicate, alkyl polysilicate, silane and variants, titanium isopropoxide, condensate, condensation product, polyalkoxysiloxane