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BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

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(54) Title: COEFFICIENT OF THERMAL EXPANSION FILLER FOR VANADIUM-BASED FRIT MATERIALS AND/OR METHODS OF MAKING AND/OR USING THE SAME

(57) Abstract: Certain example embodiments relate to seals for glass articles. Certain example embodiments relate to a composition used for sealing an insulated glass unit. In certain example embodiments the composition includes vanadium oxide, barium oxide, zinc oxide, and at least one additional additive. For instance, another additive that is a different metal oxide or different metal chloride may be provided. In certain example embodiments, a composition may be combined with a binder solution that substantially or completely burns out by the time the composition is melted. In certain example embodiments, a CTE filler is included with a frit material. In certain example embodiments, a vacuum insulated glass unit includes first and second glass substrates that are sealed together with a seal that includes the above-described composition.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C03C3/12 C03C8/24 C03C27/06 E06B3/66
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)

C03C E06B

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, 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	US 2005/233885 A1 (YOSHIDA MASAHIRO [JP] ET AL) 20 October 2005 (2005-10-20) cited in the application	10-23
Y	paragraphs [0062] - [0064]; claim 4; example V13; table 3	1-9, 24-27
Y	----- EP 1 065 183 A1 (NIPPON SHEET GLASS CO LTD [JP]) 3 January 2001 (2001-01-03) column 9, line 22, paragraph 43-47; figure 3	1-9, 24-27
X	----- US 2006/003883 A1 (YOSHIDA MASAHIRO [JP] ET AL) 5 January 2006 (2006-01-05) claims 1-3; examples; table 1	10-23
A	----- US 4 221 604 A (CHIRINO AGUSTIN M ET AL) 9 September 1980 (1980-09-09) claim 1	1-27
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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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,P	WO 2012/115796 A1 (GUARDIAN INDUSTRIES [US]; DENNIS TIMOTHY A [US]) 30 August 2012 (2012-08-30) cited in the application claim 1 -----	1-27
E	WO 2013/101748 A1 (GUARDIAN INDUSTRIES [US]) 4 July 2013 (2013-07-04) cited in the application claim 1 -----	24
X,P	US 2012/308747 A1 (DENNIS TIMOTHY A [US]) 6 December 2012 (2012-12-06) claim 1 -----	24
X,P	US 2012/213954 A1 (DENNIS TIMOTHY A [US]) 23 August 2012 (2012-08-23) claim 1 -----	24

INTERNATIONAL SEARCH REPORT

Information on patent family members

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