

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 June 2001 (07.06.2001)

PCT

(10) International Publication Number
WO 01/040568 A3

- (51) International Patent Classification⁷: **D06N 7/00**, 1320 S.W. 22nd Street, Blue Springs, MO 64015 (US).
3/04, E04D 12/00, B32B 5/26 **TOBIN, Robert, J.**; 121 Oakview Drive, Double Oak, TX
75077 (US).
- (21) International Application Number: PCT/US00/32270
- (22) International Filing Date: 21 November 2000 (21.11.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/168,057 30 November 1999 (30.11.1999) US **Published:**
09/663,255 15 September 2000 (15.09.2000) US — with international search report
- (71) Applicant: **ELK CORPORATION OF DALLAS** (88) Date of publication of the international search report:
[US/US]; Suite 1000, 14643 Dallas Parkway, Dallas, TX 75240-8871 (US). 3 October 2002
- (72) Inventors: **KIHK, Matti**; 2500 Springwood Lane, Richardson, TX 75082 (US). **BRYSON, Michael, L.**; *For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



WO 01/040568 A3

(54) Title: ROOFING UNDERLAYMENT

(57) Abstract: The present invention relates to a roofing underlayment system comprising two layers of a coated structural article which comprises a substrate having an ionic charge coated with a coating having essentially the same ionic charge or one layer of such coated structural article in combination with one layer of felt material. The coating of the coated structural article consists essentially of a filler material and a binder material wherein the binder material bonds the filler material together and to the substrate and wherein the coating does not bleed through the substrate. The roofing underlayment system of the present invention can impart a Class B or better (Class A) fire rating to a roof assembly.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/32270

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 D06N7/00 D06N3/04 E04D12/00 B32B5/26		
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 D06N E04D B32B		
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		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 965 257 A (AHLUWALIA YOUNGER) 12 October 1999 (1999-10-12) cited in the application column 2, line 11 - column 4, line 59; claims column 6, line 32 - line 37 ---	1-18
A	US 5 717 012 A (HORNER JR CHARLES J ET AL) 10 February 1998 (1998-02-10) cited in the application column 3, line 25 - line 28; claims ---	1
A	DE 197 29 533 A (KLEIN HANS GEORG) 14 January 1999 (1999-01-14) column 4, line 14 - line 50; figure 2 --- -/--	1
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
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 filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *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
Date of the actual completion of the international search 12 March 2001		Date of mailing of the international search report 27/03/2001
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		Authorized officer Pamies Olle, S

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/32270

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 1 228 592 A (PERMANITE LIMITED) 15 April 1971 (1971-04-15) the whole document -----	1

INTERNATIONAL SEARCH REPORT

Intern: al Application No
PCT/US 00/32270

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5965257 A	12-10-1999	AU 7984598 A EP 0991602 A WO 9900338 A	19-01-1999 12-04-2000 07-01-1999
US 5717012 A	10-02-1998	CA 2236643 A EP 0858480 A WO 9716483 A US 5776841 A	09-05-1997 19-08-1998 09-05-1997 07-07-1998
DE 19729533 A	14-01-1999	AU 7654798 A WO 9902797 A	08-02-1999 21-01-1999
GB 1228592 A	15-04-1971	NONE	