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(71) Applicant: **KORDSA TEKNİK TEKSTİL A.Ş.** [TR/TR];  
Alikahya Fatih Mahallesi Sanayici Caddesi No:90, Kordsa  
Teknoloji Merkezi, 41310 Kocaeli (TR).

(72) Inventors: **OZTURK, Cem**; Kordsa Teknik Tekstil A.Ş.,  
Alikahya Fatih Mahallesi Sanayici Caddesi No:90, Kocaeli  
(TR). **KORKMAZ, Deniz**; Kordsa Teknik Tekstil A.Ş.,  
Alikahya Fatih Mahallesi Sanayici Caddesi No:90, Kocaeli  
(TR).

(74) Agent: **ANKARA PATENT BUREAU LIMITED**;  
Kavaklıdere Mahallesi Bestekar Caddesi No:10, 06680  
Ankara (TR).

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09 January 2020 (09.01.2020)

(54) Title: A HOT MELT EPOXY RESIN SYSTEM AND PROCESS FOR MAKING THE SAME

(57) Abstract: A hot melt epoxy resin system comprising an epoxy resin composition and a curing agent/catalyst paste composition that is fast curable, isothermal press curable, hot demoldable capable under three minutes at 150°C and Class A surface giving and suitable to use in the production of automotive interior composite parts characterized in that said epoxy resin composition comprising an epoxy resin mixture comprising a first resin and a second resin; at least one thermoplastic toughener; at least one UV hindered amine light stabilizer; at least one UV absorber and/or blocker; 1,3,5-tris(4-tert.-butyl-3-hydroxy-2,6-dimethylbenzyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione as anti-oxidant; hydrophobic fumed silica as air release/rheology agent and hexamethyldisiloxane as an internal mold release agent and said curing agent/catalyst paste composition comprising a paste mixture, which is comprising dicyandiamide (DICY) below 10µm particle size and sebacic dihydrazide below 10µm particle size; an accelator selected from the group comprising diuron or imidazoles; cycloaliphatic polyamine as liquid curing agent; fumed silica as air release/rheology agent and silicone diamine as a fiber-matrix adhesion promoter.



WO 2019/203754 A3

## INTERNATIONAL SEARCH REPORT

International application No.

**PCT/TR2018/050808**

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> C08L 63/00 (2006.01)i; C08J 5/24 (2006.01)i  According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) C08L; C08J  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)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2016087935 A1 (TORAY INDUSTRIES [JP]) 09 June 2016 (2016-06-09) page 18, lines 24-31; page 19, lines 1-10; page 22, lines 18-31; page 23, lines 1-20; page 24, line 2	1-31
A	WO 2017171127 A1 (HANKUK CARBON CO LTD [KR]) 05 October 2017 (2017-10-05) claims 1-7	1-31
A	US 2014363646 A1 (ZEON CORP [JP]) 11 December 2014 (2014-12-11) paragraph 47,65,83,182	1-31
A	US 2009302462 A1 (SUMITOMO BAKELITE COMPANY LIMITED) 10 December 2009 (2009-12-10) claims 1-30	1-31
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 "D" document cited by the applicant in the international application "E" earlier application or patent 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 <b>13 December 2019</b>		Date of mailing of the international search report <b>13 December 2019</b>
Name and mailing address of the ISA/TR <b>Turkish Patent and Trademark Office (Turkpatent) Hipodrom Caddesi No. 13 06560 Yenimahalle Ankara Turkey</b> Telephone No. (90-312) 303 11 82 Facsimile No. +903123031220		Authorized officer  <b>Emre Celebi</b>  Telephone No.

**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.: **32,33**  
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:  
  
The subject matter of claims 32 and 33 fails to comply with the clarity and conciseness requirements of PCT Article 6 to such an extent that a meaningful search on the basis of these claims is impossible for the following reasons: It is unclear what is meant by the expressions "adding all individual components of said epoxy resin composition".
  
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).

**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

International application No.

**PCT/TR2018/050808**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
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