

Fire protection element comprising a backing web

Patent No.: EP3263793

Publication date: 2018-01-03

Applicant(s): Hilti

Abstract

The invention relates to a fire protection element (1), comprising: a carrier material (2) having a woven carrier fabric; an intumescent material (3), which is applied to at least one surface of the carrier material (2) and which forms elongate structures when heat is applied; wherein the carrier material (2) has a woven carrier fabric having loops (8) for receiving the elongate structures of the intumescent material (3) that arise when heat is applied and for hooking together with said elongate structures.

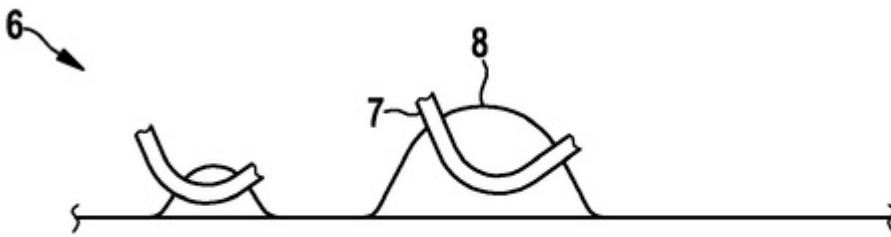


Fig. 3

Flame retardant treating agent for kapok-fiber or kapok-nonwoven fabric

Patent No.: US20180002548


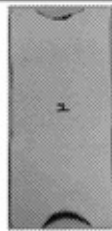


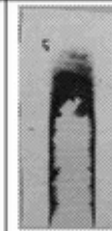

Publication date: 2018-01-04

Applicant(s): Hyundai Motor

Abstract

Provided herein is a flame retardant agent that is useful for treating kapok-fiber or kapok-nonwoven fabric. Kapok-fiber or kapok-nonwoven fabric when treated with the flame retardant agent is capable of reducing the impact of fire and providing flame retardancy. The flame retardant treated kapok-fiber or kapok-nonwoven fabric has desired properties including acid resistance, light resistance, absence of stickiness, and absence of a glaucous appearance. Thus, the flame retardant treating agent is suitable for use with materials used in vehicles, clothes, bedclothes, and the like.

[0091] [Table 1]

Classification	Example			Comparative Example		
	1	2	3	1	2	3
Increase in amount (%)	42	45	47	15	58	41
Scattering	No	No	No	Occurred	No	No
Hydrolysis resistance	pH 6	pH 6	pH 6	pH 3	pH 6	pH 6
Yellowing	No	No	No	Occurred	No	No
Glaucous appearance	No	No	No	No	No	Occurred
Stickiness	No	No	Slightly sticky	Excessively sticky	Excessively sticky	No
Flame retardancy	Self-extinguishable	Self-extinguishable	Self-extinguishable	Self-extinguishable	105 mm/min	Self-extinguishable
						

Meltable intumescent flame retardant compositions

Patent No.: WO2018098408

Publication date: 2018-05-31

Applicant(s): QED LABS

Abstract

Meltable flame retardant compositions and fibers fabricated thereof are provided. Compositions of the present disclosure comprise a polymer, a nitrogenous compounds and/or a phosphorus compound. Fibers and compositions of the present disclosure can be used to make fabrics. When fibers, fabrics, and compositions of the present disclosure are exposed to flame, non-flammable gases are released such that the flames is retarded and/or extinguished.

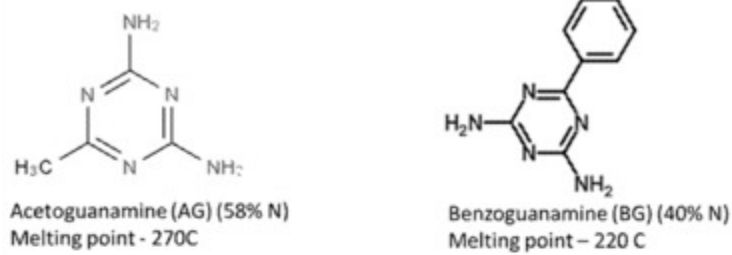


Figure 1

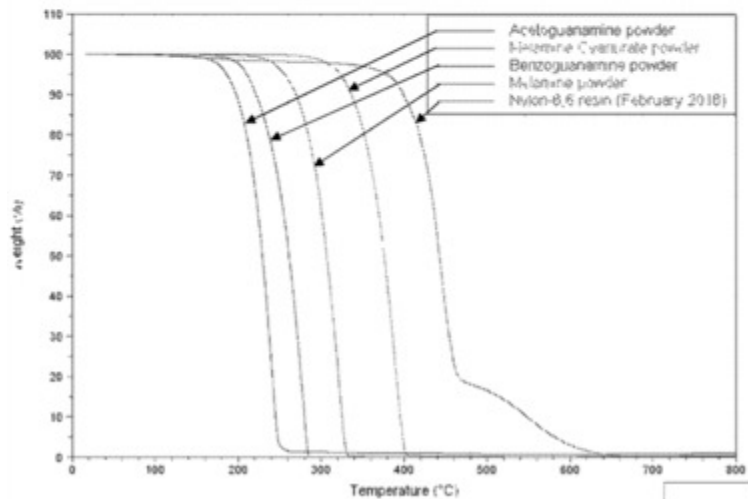


Figure 2

Graphite and nanoclay flame retardant fabrics

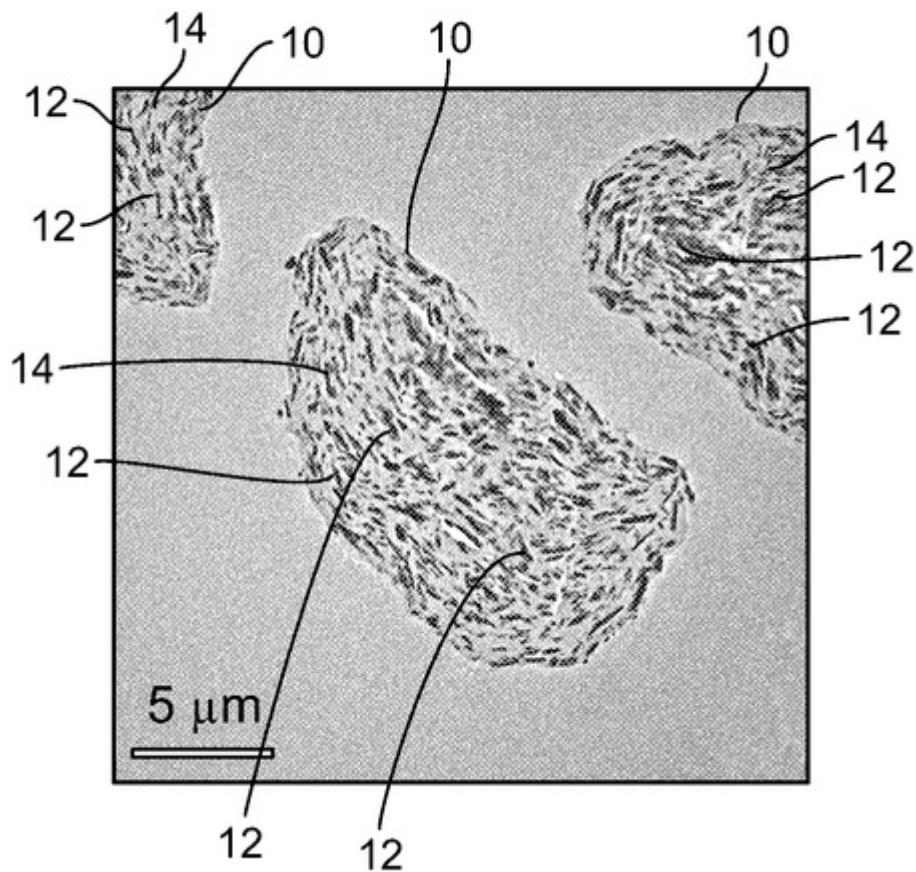
Patent No.: US20180266048

Publication date: 2018-09-20

Applicant(s): Precision custom coatings

Abstract

A flame resistant textile fabric includes a coating having an expandable graphite, or a combination of an expandable graphite and a nanoclay, disposed on one or both of its first and second surfaces. The flame resistant textile fabrics may be used to make one or more components of a mattress, such as a filler cloth, or fabric fire barrier.



Fire retarding mixture and fabric treated with it

Patent No.: WO2018042306

Publication date: 2018-03-08

Applicant(s): Politecnico Di Milano / Prosetex

Abstract

Fire-retarding mixture comprising + a polymeric binder consisting of a butadiene-based latex + titanium dioxide TiO_2 + alkaline lignin.

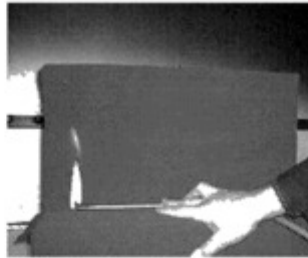


Fig. 1



Fig. 2

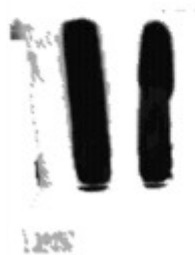


Fig. 3

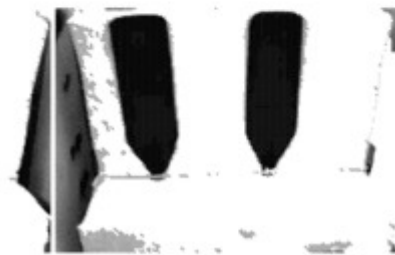


Fig. 4

Woven, nonwoven and expandable graphite composite material

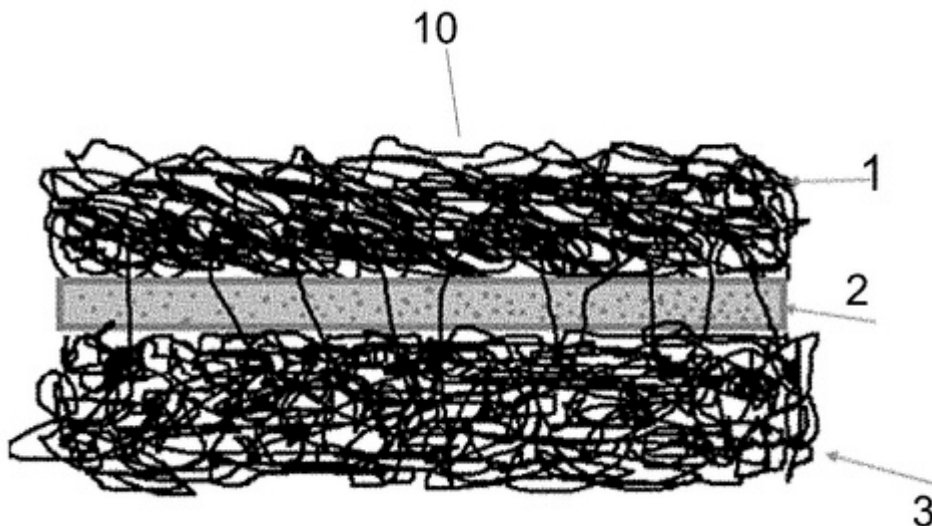
Patent No.: US20180134002

Publication date: 2018-05-17

Applicant(s): Chapman thermal products / Tex Tech Industries

Abstract

A composite flame barrier includes at least one layer of nonwoven flame resistant fibers, and at least one layer of heat absorbing intumescent expandable graphite held together with polymeric binders and fire resistant fibers in a sheet structure. The composite material provides thermal protection that cannot be achieved using the expandable graphite is alone. By mechanically attaching a nonwoven felt or hydro-entangled nonwoven material to the layer containing expandable graphite, the graphite becomes stabilized and is more resistant to forces that may damage the material (wind, high velocity flames etc.) and decrease or eliminate the thermal performance of the expandable graphite. The composite flame barrier is useful in applications where prolonged fire and heat resistance is required, and has an advantage of being flexible and lightweight. The uses for the material include emergency portable fire shelters, structural protection of aircraft, structural steel fire proofing, fire-rated wall assemblies, and other fire-resistant applications.



Resin composition, article of manufacture made therefrom

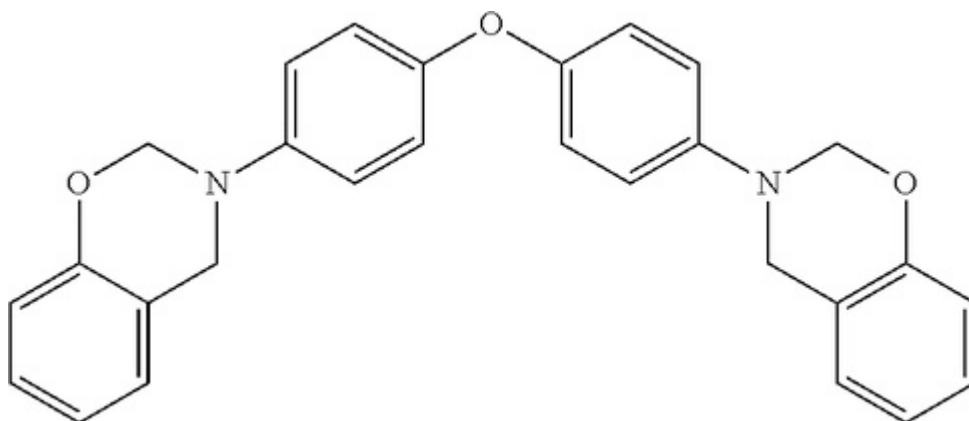
Patent No.: US20180086911

Publication date: 2018-03-29

Applicant(s): Elite Material

Abstract

Disclosed is a resin composition, comprising the following components: (A) 100 parts by weight of an epoxy resin; (B) 10 to 60 parts by weight of a diamino diphenyl ether type benzoxazine resin having a softening point of 40° C. to 140° C.; (C) 10 to 40 parts by weight of a co-hardener; and (D) 10 to 40 parts by weight of a flame retardant which comprises (d1) a high melting point flame retardant with a melting point of greater than 260° C. or (d2) a metal phosphinate flame retardant, wherein the metal is selected from Group IIIA elements. Also disclosed is an article of manufacture obtained from the resin composition and a use thereof. Accordingly, the demands of high frequency application can be met, and a balance of low thermal expansion, high thermal resistance and low warpage in the system can be struck



Flame retardant polyurethane artificial leather

Patent No.: US20180237637

Publication date: 2018-08-23

Applicant(s): Kia Motors / Baiksan

Abstract

Provided herein is a flame retardant polyurethane (PU) artificial leather and a method for manufacturing the flame retardant polyurethane (PU) artificial leather, wherein the method may include preparing a microfiber nonwoven fabric material, consecutively forming a polyurethane coating layer and an adhesive layer on one surface of a release paper, and combining the nonwoven fabric material and the release paper.

