GREEN POLYMERS

Patent Alert

Bio-based reactive polyurethane hotmelt adhesives

Patent #: WO2020/043333

Date of publication: 2020-03-05

Applicant(s): HENKEL

Inventor(s): WARD JAMES, HOLTGREWE CHRISTIAN, PASEMANN TIMO, LINDHORST ANJA COSIMA

Abstract

The present invention relates to a moisture curable hotmelt adhesive composition comprising at least one polyurethane prepolymer obtained from the reaction of a) at least one polyether; b) at least one (meth)acrylic resin; c) at least one crystalline polyester; d) at least one amorphous polyester; e) at least one isocyanate compound; in a presence of a catalyst, wherein at least one of said polyether, crystalline polyester and amorphous polyester is partially or completely bio-based material.

Fig. 1

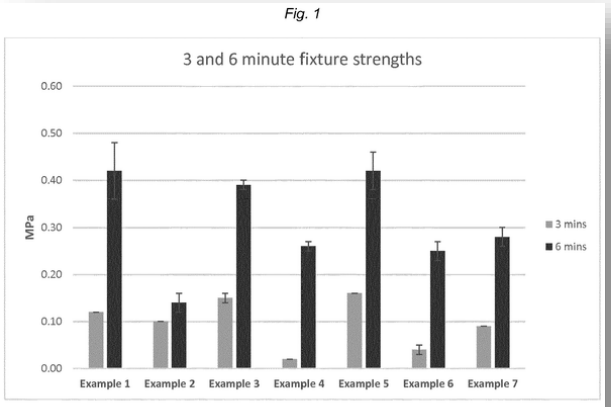
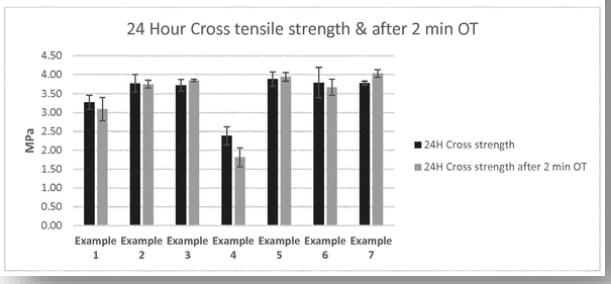


Fig. 2



Bio-based elastomeric eva compositions and articles and methods thereof

Patent #: WO2019/202406

Date of publication: 2019-10-24

Applicant(s): BRASKEM

Inventor(s): DELEVATI GIANCARLOS, SOTO OVIEDO MAURO ALFREDO
MUNHOZ ANDERLE FERNANDA, RENCK OMAR WANDIR, ESTEVES VIVEIRO JOSÉ AUGUSTO

Abstract

A polymer composition may include an elastomeric ethylene-vinyl acetate, in which at least a portion of ethylene from the elastomeric ethylene-vinyl acetate is obtained from a renewable source of carbon. A curable polymer composition, an expandable polymer composition, articles, cured articles, and expanded articles may include or be formed from such polymer composition. A process for producing a polymer composition may include polymerizing ethylene at least partially obtained from, a renewable source of carbon with vinyl acetate to produce an ethylene vinyl acetate copolymer; and mixing the ethylene-vinyl acetate copolymer with an elastomeric polyolefin to produce an elastomeric ethylene-vinyl acetate.

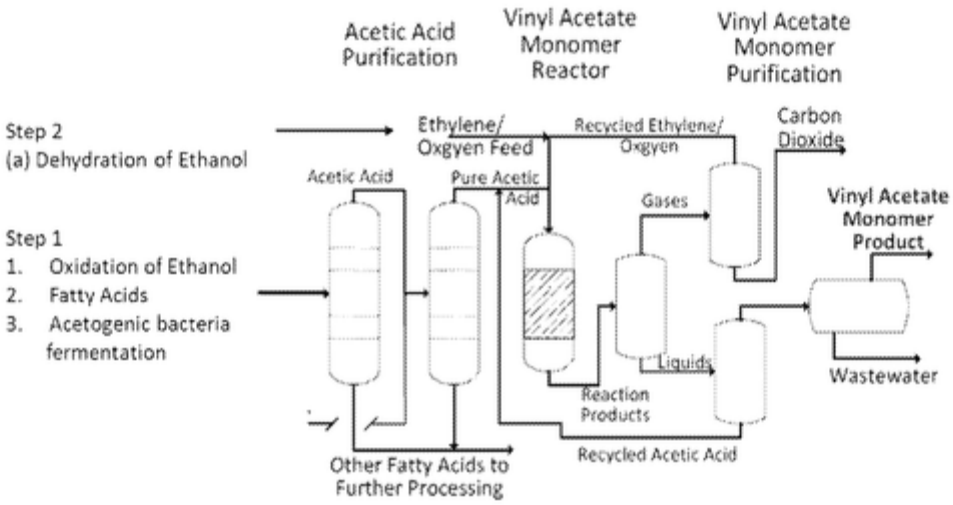


FIG. 1

Method for manufacturing a textile product starting from tendons or nerves of animal origin

Patent #: FR3074504

Date of publication: 2019-06-07

Applicant(s): CORENTHIN JEREMY

Inventor(s): CORENTHIN JEREMY

Abstract

A method for manufacturing a thread comprising the following steps: *** selecting at least one animal nerve or tendon; *** (flattening) or rolling (A) the at least one nerve or at least one tendon; *** separating (B) the at least one nerve or at least one tendon into at least two groups of first fibres in order to form at least one braid; *** stretching (D) said braid in order to extract a quantity of moisture; *** combing in order to separate the first fibres; *** drying (E) the first fibres; *** spinning (F) said first fibres.

Bio-based fire retardant derived from polyacrylamide grafted starch and use thereof

Patent #: US10377874

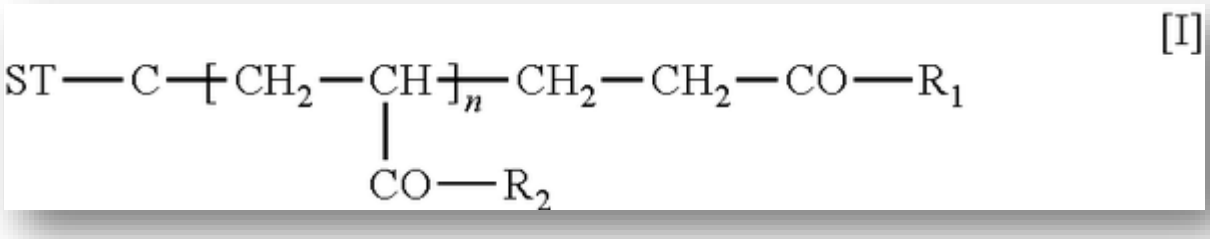
Date of publication: 2019-05-02

Applicant(s): SHENYANG SHUNFENG NEW MATERIAL

Inventor(s): LIU CHUNFENG, LV HUIYONG, WANG YANGSONG, LI NA, GE JING, LI YINGXU, YU SHUAI, GAO MENG

Abstract

A bio-based fire retardant derived from polyacrylamide grafted starch and use thereof. This disclosure relates to the field of polymer additives for improving fire safety of materials. Specifically, the present disclosure is bio-based material derived from polyacrylamide grafted starch as fire retardants to polymers. Moreover, the disclosure relates to their uses in the fields of coating, adhesive, etc.



Acrylated and acylated or acetalized polyol as a biobased substitute for hard, rigid thermoplastic and thermoset materials

Patent #: US20190177454

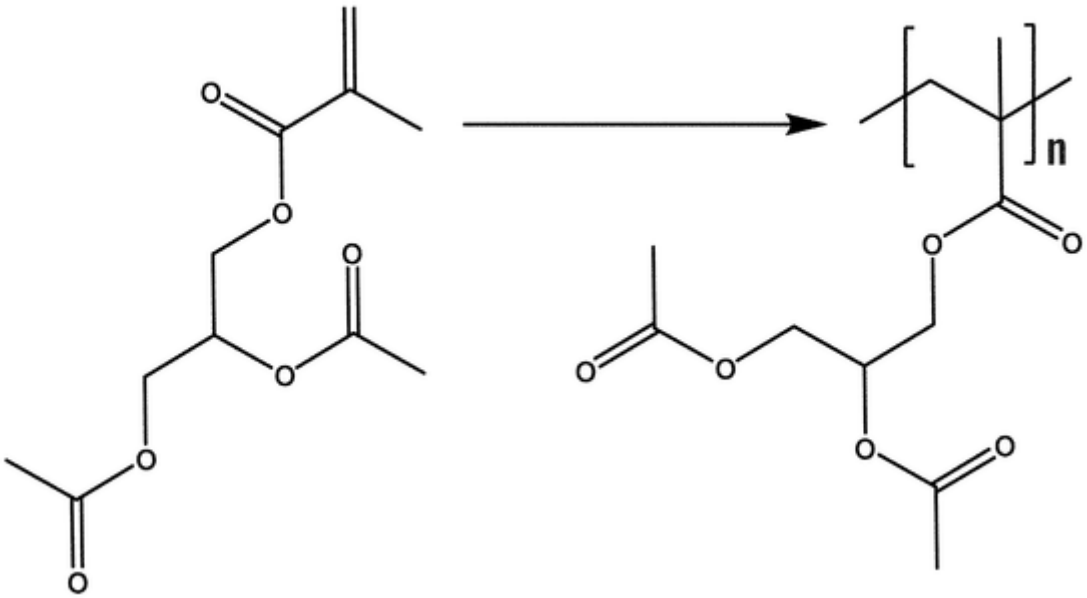
Date of publication: 2019-06-13

Applicant(s): IOWA STATE UNIVERSITY RESEARCH FOUNDATION

Inventor(s): COCHRAN ERIC W, HERNANDEZ NACU, FORRESTER MICHAEL, GOYAL SHAILJA, HOHMANN AUSTIN

Abstract

The present invention relates to a homopolymer, copolymer, block copolymer, and statistical copolymer comprising plural polyol monomeric units. The polyol monomeric units being acrylated and acylated or acetalized. The acrylated and acylated or acetalized polyol monomeric units have an average degree of acrylation which is 1 or more, but less than the number of the hydroxyl groups of the polyol and have an average degree of acylation or acetalization which is 1 or more, but less than the number of the hydroxyl groups of the polyol. The present invention also relates to a method of making the homopolymers, copolymers, block copolymers, and statistical copolymers, and using them in various applications, such as asphalt rubber modifiers, adhesives, or an additive in a fracking fluid for oil fracking.



Bio-based polycarbonate ester resin for eyeglass frame

Patent #: WO2020/013507

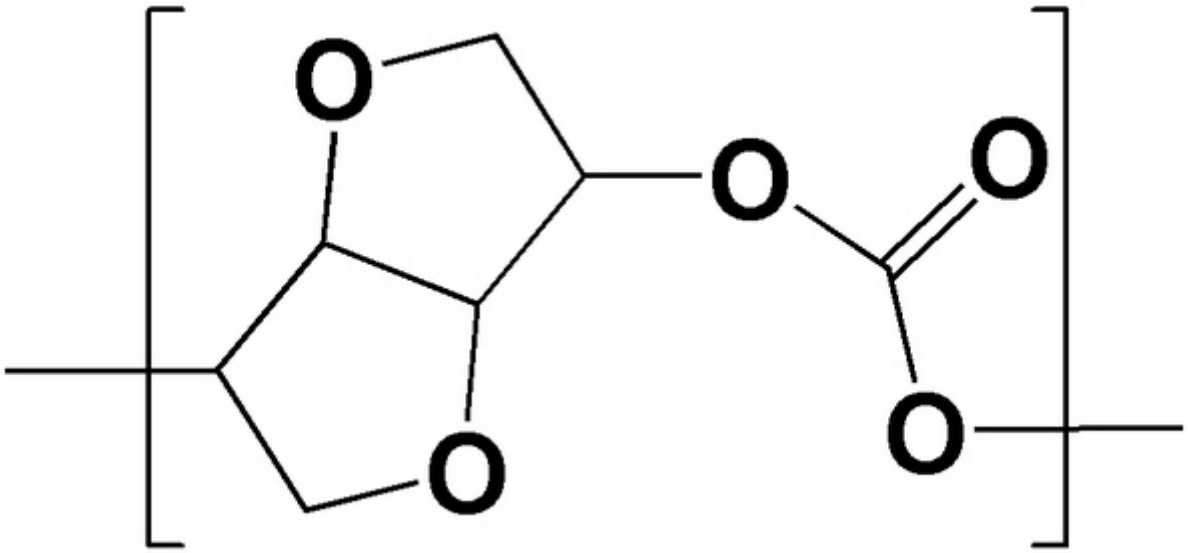
Date of publication: 2020-01-16

Applicant(s): SK Chemicals

Inventor(s): OH, Kwang Sei, LEE, JONG IN

Abstract

The present invention relates to a bio-based polycarbonate ester resin for an eyeglass frame, the resin being environment-friendly by not containing types of bisphenol, and exhibiting excellent heat resistance, transparency, strength, hardness, dimensional stability and chemical resistance. In addition, various colors may be painted and coated on during post-processing, a separate additive is not required during a molding process, and processing is undergone at a temperature lower than that for conventional plastic materials for an eyeglass frame, and thus manufacturing costs may be reduced.



Polyurethane coating has a high content of biobased monomers comprising isosorbide and pentamethylene diisocyanate

Patent #: WO2019/081868

Date of publication: 2019-05-02

Applicant(s): Roquette Frères

Inventor(s): JACQUEL NICOLAS, SAINT-LOUP RENE, PASCAULT JEAN-PIERRE, BLACHE HELOISE, ROUSSEAU ALAIN, MECHIN FRANCOISE, FLEURY ETIENNE

Abstract

The present invention relates to a crosslinkable composition for forming a polyurethane coating on different types of substrates. The present invention relates in particular to a polyurethane composition with a high biosourced monomer content, comprising isosorbide as a diol chain extender and a pentamethylene diisocyanate trimer; the invention also relates to the polyurethane coating obtained from this composition.

Biobased barrier coatings comprising polyol/saccharide fatty acid ester blends

Patent #: US20200095731

Date of publication: 2019-10-25

Applicant(s): TECHNOLOGIES HOLDINGS

Inventor(s): Spender Jonathan, Bilodeau Michael Albert, Mikail Samuel

Abstract

The present invention describes tunable methods of treating cellulosic materials with a barrier coating comprising at least two polyol and/or saccharide fatty acid ester that provides increased water, oil and grease resistance to such materials without sacrificing the biodegradability thereof. The methods as disclosed provide for adhering of the barrier coating on articles including articles comprising cellulosic materials and articles made by such methods. The materials thus treated display higher hydrophobicity and lipophobicity and may be used in any application where such features are desired.