

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 14-63149- -2	FECHA: 2016-03-30 15:23:43
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 1 REGISTRO/DEPOSITO/CONCESION/DEPOSITO
TRA: 2 PATENTES DE INVENCION	FOLIOS: 5
ACT: 519 TRASLADOINFORME	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
EDDY MARGOT GELVEZ EPALZA

Asunto: Radicación: 14-63149- -2
Trámite: 2
Evento: 1
Actuación: 519
Oficio: 3333
Folios: 5

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional	X				
Vía PCT (Fase Nacional)		Capítulo I		Capítulo II	
No. Solicitud Internacional					
Fecha de Presentación Internacional					

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 14-063149-00000-0000	25/marzo/2014
Reivindicaciones:	Rad. N° 14-063149-00000-0000	25/marzo/2014

2. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto sólo se estudiaran las reivindicaciones 1 a 3 del capítulo reivindicatorio (Radicado N°12-063149-00000-0000).

Título de la solicitud: “Método de desalcalinización del vidrio” (Pág. 1, radicado N°

14-063149-00000-0000).

El problema planteado en esta solicitud consiste en la necesidad desarrollar métodos alternativos y menos contaminantes con los cuales se pueda lograr un mayor endurecimiento, aumento de resistencia química y lubricación superficial del vidrio.

Para resolver este problema técnico, la solicitud en estudio proporciona un método para desalcalinización del vidrio que consta de aplicar dióxido de carbono gaseoso por soplado superficial, previamente humidificado mediante burbujeo en agua carbonatada, sobre la superficie de vidrio durante la etapa de enfriamiento y recocido del vidrio.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): C03C 25/66.

3. Descripción (Art 28 D 486)

La descripción no divulga la invención de manera suficientemente completa para que la persona del oficio normalmente versada en la materia pueda ejecutarla (ó reproducirla). La solicitud presenta términos generales como por ejemplo: *“La temperatura a la cual se realiza la desalcalinización del vidrio debe estar en el intervalo de temperaturas en que se produce la (sic) relajación de tensiones...”*, *“...hasta obtener el grado de desalcalinización deseado, mediante cambios inducidos en la superficie del vidrio.”* sin que se especifique las condiciones técnicas del método por medio de las cuales se deba llevar a cabo. Por otro lado, se encuentra que tampoco se presentan pruebas o ensayos realizados al vidrio por medio de los cuales se demuestre que el método de desalcalinización superficial utilizando CO₂, mejore la dureza, la resistencia química y la lubricación superficial del vidrio, comparado con los métodos de estado del arte.

Se requiere a la solicitante hacer las aclaraciones necesarias. Recuerde en no ampliar la materia reclamada inicialmente.

4. De la solicitud de patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

- La reivindicación 1 que tiene por objeto un método, sin embargo, no muestra la secuencia de etapas técnicas por medio de las cuales se transforme una materia en un producto o se obtenga un resultado. Adicionalmente no se reivindican las etapas técnicas con sus condiciones técnicas (temperaturas, flujos, presiones, etc). Por todo lo anterior esta reivindicación no es clara. Se sugiere realizar las aclaraciones respectivas o definir la invención por sus características esenciales y estructurales, teniendo en cuenta de no modificar o ampliar la material ya divulgada.
- La reivindicación 3 que tiene por objeto un sistema no es clara, teniendo en cuenta que un sistema se define como un conjunto de aparatos y/o parte de estos, que cooperan entre sí para lograr un propósito, y en este caso particular describe la forma de conexión del sistema, es decir, presenta

características funcionales del sistema, sin que describa correctamente sus partes.

- La reivindicación 3 presenta efectos, al mencionar “...hasta obtener el grado de desalcalinización deseado, mediante cambios químicos inducidos en la superficie del vidrio.” lo cual no es permitido. Las reivindicaciones deben caracterizar un sistema por la forma o constitución del mismo y las partes que lo componen. No se aceptan reivindicaciones que caractericen resultados, usos, ventajas o efectos.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud nacional: marzo 25 de 2014 y se encontró el siguiente documento que anticipa el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación*
D1	CO02-003953	“Proceso para la desalcalinización del vidrio mediante CO ₂ ”	29/Agosto/2002

El documento D1¹ divulga procesos para aumentar la resistencia mecánica y química del vidrio, y a la vez proveer su lubricación, mediante la aplicación de dióxido de carbono humidificado. Este proceso está caracterizado por su no-toxicidad y por su baja corrosividad (resumen).

Examen de Patentabilidad (Art 14 D486)

Novedad (Art16 D486)

La reivindicación 1 consiste en “*Un proceso para la fabricación de mezclas de fricción o bloques de freno...*” (Radicado N° 14-063149-00000-0000).

Comparación de las características técnicas **esenciales**, con las del Estado de la Técnica:

Características Esenciales	D1
Método de desalcalinización de la superficie del vidrio caracterizado porque:	Proceso de desalcalinización del vidrio (Pág.9, Párr. 3)
Consiste en que se aplica gas desalcalinizador mediante soplado superficial de dióxido de carbono (CO2) gaseoso,	Para lograr un buen efecto desalcalinizador con el CO ₂ , es preciso humidificarlo inmediatamente antes de su aplicación, con lo que se favorece la formación de ácido carbónico. El equipo de aplicación del CO ₂ es por lo demás idéntico al que se utiliza para aplicar SO ₂ (Pag.11, Párr.3).
Sobre la superficie de vidrio durante la etapa de enfriamiento y recocido del vidrio.	Debe cumplir con estar localizado inmediatamente antes del enfriamiento final de la pieza (Pág.11. Párr.1, Rad. No.02-003953-00008).

¹http://serviciospub.sic.gov.co/~oparra/serv_57/externas/DetallePatente.php?consultando=patentescolombianas¶metros=opparametros&vano=2&vtra=2&vnum=3953&vcon=%20%20&vcons=0&vcre=2310&vtem=IQ

De acuerdo con la tabla anterior, las características esenciales del método de la reivindicación 1 habían sido divulgadas previamente en el documento D1, por lo tanto, la materia reivindicada no es nueva.

Así mismo, el documento D1 divulga las características de las reivindicaciones dependientes así:

Reivindicaciones 2: iv) la presión de envase del CO2 en cilindros es de aproximadamente 6.0 Mpa (870 psig), suficiente para impulsar el gas a través de una red sin necesidad de contar con impulsión mediante otro gas. (Reivindicación 2, Rad. No.02-003953-00010).

La reivindicación 3 consiste en “Sistema para llevar a cabo el método de desalcalinización de la superficie de vidrio...” (Radicado N° 14-063149-00000-0000).

Comparación de las características técnicas **esenciales**, con las del Estado de la Técnica:

Características Esenciales	D1
Sistema para llevar a cabo el método de desalcalinización de la superficie de vidrio CARACTERIZADO PORQUE consiste en que	El proceso está definido, (...) por sus pasos (reivindicación 1, Rad.02-005963-00010):
Se conecta un envase o recipiente para almacenamiento del CO ₂ grado industrial al sistema de aplicación de gas desalcalinizador con regulación de presión, manómetro, flujómetro y válvula de control de flujo;	Se conecta un envase o recipiente para almacenamiento del CO ₂ grado industrial, ya sea tanque criogénico, tanque refrigerado o cilindro, al sistema de aplicación de gas desalcalinizador, el cual comprende un regulador de presión, un manómetro, un flujómetro y válvula de control de flujo; a continuación se instala una botella humidificadora (...) la salida de la botella humidificadora se conecta mediante tubería de conducción a un elemento inyector (...).
Luego se conecta la botella humidificadora donde el CO ₂ gaseoso entra a través de un tubo cuyo extremo inferior está sumergido en agua, (...) la salida de la botella humidificadora se conecta mediante tubería de conducción al inyector de CO ₂ , y la boquilla de direccionamiento del CO ₂ , (...).	(Reivindicación 1, Rad. No.02-005963-00010).
Por último se procede a ajustar el flujo de CO ₂ hasta obtener el grado de desalcalinización deseado,	Ajuste del flujo para lograr el grado de desalcalinización deseado, mediante la ocurrencia de cambios químicos inducidos en la superficie del vidrio (Reivindicación 1, Rad. No.02-005963-00010).

De acuerdo con la tabla anterior, las características esenciales del sistema de la reivindicación 3 habían sido divulgadas previamente en el documento D1, por lo tanto, la materia reivindicada no es nueva.

Es importante mencionar que existen en el estado de la técnica otros documentos en donde ya eran conocidos procesos de desalcalinización de la superficie del vidrio con la solución de un ácido, ejemplos de soluciones ácidas (...) ácido carbónico (Párr.41 y 42 Patente US2011/0244153).

6. Conclusión

Los requisitos de Patentabilidad de la presente Solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	CO2002-003953	1 a 3	Novedad y Nivel Inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Si como respuesta a este requerimiento el solicitante llegara a modificar: i) el capítulo reivindicatorio, ii) la descripción de la invención a proteger, iii) o presente un nuevo capítulo reivindicatorio, no deberá pagar la tasa de modificación voluntaria pero sí la correspondiente a la tasa de examen de patentabilidad para que se estudie la materia modificada. En todo caso, el número de requerimientos por no patentabilidad estará supeditado a que el término del estudio de patentabilidad no sea superior a 18 meses, contados desde la publicación de la solicitud de patente de invención. Adicionalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones deberá pagar la tasa por reivindicación adicional.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2016-04-05

Elaboró: Olga Ximena Benavides Salazar
Revisó: Rachid Ponce Vergel

Search history

Search 1: PN=(us3402054) (Results 1)

Search 2: [SP]: background of the inventionthe invention broadly relates to friction materials which comprise an inorganic fiber and a binder substantially wholly composed of a metallic sulfide formed in situ.2. description of the prior artfriction materials used as brake linings, disc brake pads, clutch facings or railway brake blocks are commonly made under suitable conditions of temperature and pressure from asbestos or other inorganic fiber and other ingredients which may include rubber, metallic powders, mineral fillers, cured rubber powders, graphite, rubber-curing ingredients, antioxidants and lubricants. a binder is always present, and a resin is commonly added to the mix to act as a binder. rubber itself will act as a binder, and rubber and resin may be present together vegetable oils can also be used as binders, again with or without rubber.friction materials containing conventional organic binding agents exhibit poor frictional stability under varying temperature conditions. considerably higher temperatures are generated in disc brakes than in drum brakes, with the result that organically-bound friction materials are more likely to disintegrate the thermal degradation of such binders results in inferior frictional characteristics, giving rise to fade and often resulting in increased wear. furthermore, organic materials, particularly resins, tend to have a short shelf life, and are not always easy to reproduce.in an attempt to overcome the deleterious effects of poor thermal resistance in a friction material having an organic binder, various sintered metal and ceramic materials in which the sintering effects the bonding have been developed. however, sintering is normally a high-temperature process, and may, for example, be carried out at temperatures in excess of 750 degrees c, necessitating the use of controlled or conditioned atmospheres and other complicated manufacturing techniques.summary of the inventionit has been found that a friction material comprising an inorganic fiber, such as asbestos, and a binder substantially wholly composed of metallic sulfide formed in situ will exhibit enhanced frictional stability under varying temperature conditions.the metallic sulfide generally consists of iron sulfide formed by the reaction of sulfur with iron powder, or with a lower iron sulfide. copper sulfide, formed by the reaction of sulfur with copper powder or with cuprous sulfide, may also be present.it is critical that the binder be formed in situ.additional materials such as metallic powders, fillers, antioxidants and friction modifiers may be included in the friction material.a process for forming the friction material comprises compacting and curing a mixture of ingredients which contains sulfur with iron powder or a lower iron sulfide. optionally, copper powder or cuprous sulfide may be present.the curing may be carried out under a pressure of from 2 to 20 tons per square inch at a temperature in the range of from about 80 degrees centigrade to about 600 degrees c, depending on the proportions of the sulfides in the binder.description of the preferred embodimentsaccording to the invention, the binder is wholly or substantially wholly composed of metallic sulfide formed in situ, the metallic sulfide consisting of iron sulfide formed by reaction of sulfur with iron powder or with lower iron sulfide, with or without copper sulfide formed by reaction of sulfur with copper powder or with cuprous sulfide. the copper sulfide binder may thus be cupric or cuprous sulfide if a cupric sulfide binder dissociates after being formed the resultant cuprous sulfide still acts as a binder.iron and sulfur form a wide range of compounds with non-stoichiometric formulas, apart from the two defined sulfides FeS and FeS_2 . in this specification we refer to any such compounds as iron sulfides, whether they have a well-defined formula or not. at the same time, we classify as lower iron sulfides those iron sulfides which are capable of reacting with further sulfur to form higher valency state iron sulfides.iron sulfide may form the sole binder in the friction material, or the binder may be formed partly of iron sulfide and partly of copper sulfide. a friction material formed from asbestos or other inorganic fiber with fillers and friction modifiers will normally require a content of at least 10 percent by volume of binder calculated as metal sulfide. this figure is dependent to a certain extent on the content of inorganic fiber or of other constituents, but will usually give a satisfactory material. the proportion of metal sulfide may, of course, be increased, but any metal sulfide in excess of about 50 percent by volume is no longer acting as a binder, but as a filler. the friction material may also contain other conventional additives, for example metallic powders such as lead, tin, brass and aluminum, fillers such as barytes, rottenstone-whiting, carbon black and organic materials, and friction modifiers, such as graphite, alumina, silica and metal oxides. inorganic fibers other than asbestos include glass fibers and metallic fibers.we prefer to form the iron sulfide binder from iron powder and sulfur. the ratio of iron to sulfur may be varied over wide ranges, the preferred limits being iron to sulfur of 4:1 to 1:11/2 by weight. any iron powder or sulfur which is not combined as iron sulfide will be present as a filler, and the presence of uncombined iron or sulfur in the friction material may even be advantageous. when copper sulfide forms part of the binder, the presence of uncombined copper in the friction material may similarly be advantageous.iron is cheaper than copper, but on the other hand does not react so readily with sulfur, so that the curing temperature must be raised accordingly. the properties of the finished friction material are comparable, whether the binder is solely iron sulfide or is a mixture of iron and copper sulfides and so the choice of proportions can be selected to suit any given circumstances. curing times for a friction material in which iron sulfide is the sole binder sulfide are preferably from one-half minute upwards at pressures of from 2 to 20 tons/in 2 and temperatures of from 300 degrees to 600 degrees c if the binder also contains copper sulfide, then curing temperature may be less than 300 degrees c, even down to as low as 80 degrees c, depending on the relative proportions of iron sulfide and copper sulfide. the times, temperatures and pressures are, of course, interdependent, but in general the curing times will not exceed 10 minutes.in general friction materials according to the invention will contain from 15 to 50 percent by volume of asbestos or other inorganic fiber, and the fibers most commonly used are those of grades 5 and 7. the asbestos or other fiber and metallic sulfide binder together will normally constitute at least 25 percent by volume of the friction material, the content by volume of fillers, lubricants or other additives thus being from 0 to 75 percent.two examples will now be given (all parts being by weight):example 1the following ingredients were mixed together, and disintegrated through an 1/8-inch-mesh screen.ingredient parts
iron powder 29 sulfur 16.5 graphite 18.8 asbestos fiber (grades 5 and 7) 21.3 silica 10.4 alumina 4.0
the mixture was then cold compacted, and cured for 8 minutes at a pressure of 2 tons/in 2 and a temperature of 600 degrees c.example 2the following ingredients (with exception of the copper powder) were mixed together, disintegrated through an 1/8-inch-mesh screen, and then spread in shallow pans to cool.ingredient parts
iron powder 14.5 copper powder 14.5 sulfur 16.5 graphite 18.8 asbestos fiber (grades 5 and 7) 21.3 silica 10.4 alumina 4.0
the copper powder was then mixed in, the mixture cold-compacted, and cured for 5 minutes at a pressure of 2 tons/in 2 and a temperature of 450 degrees c.in forming the mixture of ingredients, all the constituents except for any copper or cuprous sulfide are mixed and disintegrated. the mixture may then be spread out in shallow trays to cool, and allowed to stand for 24 hours in order to eliminate the fire risk which would arise if finely divided materials, warmed by the mixing step, were stored in containers. any copper powder or cuprous sulfide may then be added and the materials mixed for a further 10 minutes. if copper powder or cuprous sulfide were mixed in initially, there would be a danger of sufficient heat being generated in the disintegration step to initiate the exothermic reaction between the sulfur and copper or cuprous sulfide.after the initial mixing step, the product may be left for as long as required. however, once copper powder or cuprous sulfide has been added, it is desirable that the mixture be cured as soon as possible because its flow characteristics tend to deteriorate.the friction characteristics of the materials of examples 1 and 2 were tested in a disc brake system on an inertia dynamometer using an automobile disc brake caliper and a cast iron braking disc 93/4 inches in diameter and one-half inch thick. two friction buttons formed from the material were placed in the caliper opposite each other on opposite sides of the braking disc. the tests were designed to simulate normal usage of automobile brakes, two sets of conditions being used as follows:test (a): 300 applications of the brake were made, 2 (Results 16)

Search 3: PN=(us4831067) (Results 1)

Search 4: [SP]: background of the inventionthis invention relates to shaped frictional elements, particularly brake linings, disc pads and clutch facings and to a method of manufacturing the same which involves the use of liquid phenolic resins and catalyst set at room temperature.in the conventional process for the manufacture of shaped frictional elements fillers such as asbestos fibres, barytes, magnesia brass or zinc filings or turnings are mixed with a binder comprising a powdered phenol formaldehyde novolak/hexamine blend and hot pressed in a mould. the action of the heat from the mould is first to fuse the binder and then to cure it.it is, however, a disadvantage of this process that noxious gases and fumes of ammonia, formaldehyde and free phenol are evolved during the curing process. the workers need to wear gloves in order to handle the ejected cured mouldings and generally the conditions of work are very unpleasant.it is a further disadvantage of the conventional process for the production of shaped frictional products that the expenditure of considerable energy is necessary to effect the fusion and setting of the binder.it is known to accelerate the cure of these materials by the addition of acids or anhydrides. many frictional materials, such as asbestos, are, however, alkaline while many of the metals included in frictional materials, while not alkaline, nevertheless react with acids. in this way much, if not all, of the accelerating effect of acids and anhydrides is vitiated when these materials are employed in an attempt to accelerate phenolic resins in bonding frictional compositions. in addition, the presence of acids is undesirable for a number of other reasons, such as their corrosive effect on metals, both in manufacture and use, and the additional handling problems, environmental effects and health risks which their use entails.the present invention seeks to improve these aspects of production by eliminating the heat curing steps during formation of the shaped frictional materials. the reduction in energy brought about by cold curing is a substantial economic advantage of the system but there is also a reduction in wear on the moulding tool and the need for extensive ventilation is eliminated.we have now found that shaped frictional articles can be produced quickly and economically at room temperature, without the hazards and inconveniences associated with heated moulds, by a process in which an aqueous highly alkaline phenol-formaldehyde condensation product is employed as a binder, said binder is intimately mixed with a quantity of frictional filler and subsequently with a second quantity of frictional filler which has previously been mixed with a quantity of a liquid ester sufficient to effect cure of the phenolic resin.these compositions set at room temperature and therefore demand less energy than the heat cured systems previously used. the low curing temperature results in the substantial elimination of noxious fumes and the hazards associated with the handling of heated moulds. being free from acidic materials, corrosion problems are greatly reduced or eliminated. in addition, because they are catalyzed by alkalies, they set in the presence of alkaline fillers such as asbestos.summary of the inventionaccordingly the present invention comprises a method for the manufacture of shaped frictional elements which comprises mixing frictional filler with from 5 percent to 30 percent of a liquid, alkaline, phenol-formaldehyde resin having a formaldehyde to phenol molecular ratio between 1:1 and 3.5:1, a weight average molecular weight between 300 and 4000 and a ph greater than 10, mixing a second portion of the same or a different frictional filler with a liquid ester curing agent for the phenol-formaldehyde resin, intimately mixing the two portions together and allowing the resultant mixture to cure in a mould.the invention also comprises a composition suitable for the manufacture of brake linings, pads and clutch facings which comprises a major proportion of frictional filler or a mixture of frictional fillers, from 5 percent to 30 percent of a liquid, alkaline, phenol-formaldehyde resin with a formaldehyde to phenol molar ratio between 1:1 and 3.5:1, a weight average molecular weight of from 300 to 4000 and a ph value above 10 and from 10 percent to 110 percent on the weight of the resin of an ester as catalyst therefor.the invention further comprises a shaped frictional article produced by the above process.detailed description of the inventionliquid alkaline phenol-formaldehyde resins suitable for use in the present invention are those in which the formaldehyde to phenol ratio is within the range 1:1 to 3.5:1 and preferably within the range 1.5:1 to 2.2:1.the alkali used may be sodium hydroxide or potassium hydroxide or a mixture of these with alkaline earth oxides such as calcium hydroxide, barium, oxide, magnesium oxide, etc. we have found that potassium hydroxide gives the best performance.the proportion of alkali in the composition may vary with the molar ratio of formaldehyde to phenol, the molecular weight of the resin, the nature of the alkali and the nature of the frictional material employed but must be sufficient in quantity and nature to impart to the resin a ph value above 10. preferably the resin will have a ph value of 11 to 13. this can normally be achieved using an alkali to phenol ratio within the range from 0.1:1 to 5:1. it will be obvious to those skilled in the art to adjust the quantity of alkali to obtain satisfactory results and this may be necessary to compensate for the effects of the frictional components employed.the weight average molecular weight (mw) of the resin must be high enough to allow gelation to occur, i.e., above 300. on the other hand, both storage stability and final strengths will tend to fall with increase in molecular weight and products with molecular weights in excess of 4000 (mw) are generally unsuitable. the preferred products are those with molecular weights within the range 600 to 1700 (mw).if desired, the solids content of the resin may be adjusted,

for example, by distillation, but this is not usually necessary and the savings in time and energy thereby achieved constitute a further advantage of the invention. the frictional fillers employed in the present invention may be any of the fillers normally employed in the brake lining industry for the production of linings, pads, clutch facings, etc. of particular interest are the non-asbestos fillers: copper powder, iron wool, iron powder, friction dust, graphite, barytes, etc., since they are becoming more widely used as the industry changes away from asbestos for environmental pollution reasons. another suitable filler is kevlar (trademark of dupont) polyaramide fibers. the alkaline phenolic resins do not react with fillers of this nature. the curing catalyst used in the invention is an ester. suitable esters include low molecular weight lactones, e.g., gamma butyrolactone, propiolactone, valerolactone and caprolactone, and esters of short and medium chain (e.g., c1-c10) fatty acids with aliphatic mono- or polyhydroxy alcohols of chain lengths c1-c10. the amount of catalyst used can be as low as 10 percent and as high as 110 percent of the liquid resin depending upon the molecular weight of the ester and the degree of acceleration required. preferably the amount of ester is from 15 percent to 40 percent by weight of the weight of liquid resin solution used. a silane is preferably included in the phenolic resin to promote adhesion to the frictional fillers and thus increase the strengths of the final cured frictional element. amounts as low as 0.05 percent by weight of the weight of liquid resin have some effect, while little, if any, additional strength is gained from the addition of amounts in excess of 5 percent. consequently, we prefer to employ a silane in an amount between 0.50 percent and 5 percent on the weight of the liquid resin and an amount between 0.2 percent and 1.5 percent is found to be particularly effective. although gamma aminopropyl triethoxy silane is the preferred material, other silanes may be substituted either wholly or in part. the following examples illustrate the present invention. manufacture of phenol formaldehyde resin solution a 94 grams of 100 percent phenol were dissolved in 67.3 grams of a 50 percent aqueous solution of potassium hydroxide. the solution was heated to reflux and 120 grams of 50 percent aqueous formaldehyde, corresponding to a phenol:formaldehyde molar ratio of 1:2, were added slowly, while maintaining reflux. the reaction mixture was maintained under reflux until it attained a predetermined viscosity corresponding to a weight average molecular weight of 1400. the resin solution was cooled to 40 degrees c. and 0.4 percent by weight on the weight of the resin solution of gamma-aminopropyl triethoxysilane added. manufacture of phenol formaldehyde resin solution b 94 grams of 100 percent phenol were dissolved in 85.3 grams of a 50 percent aqueous solution of potassium hydroxide. the solution was heated to reflux and 96 grams of 50 percent aqueous formaldehyde, corresponding to a phenol:formaldehyde molar ratio of 1:1.6, were added slowly, while maintaining reflux. the reaction mixture was maintained under reflux until it attained a predetermined viscosity corresponding to a weight average molecular weight of 1500. the resin solution was cooled to 40 degrees c. and 0.4 percent by weight on the weight of the resin solution of gamma-aminopropyl triethoxysilane added. testing of resins (a) viscosity--measured using an oswald (u-tube) viscometer at 25 deg(b) solids content--measured by heating a weighed sample (2.0.+-.0.1 g) in an air (Results 99)

Search 2 y 4 (Results 113)
5:

Search 2 and 4 (Results 0)
6:

Search resin and solvent and cure* and press* and grind/ (Results 0)
7:

Search resin and solvent and cure* and press* (Results 3873)
8:

Search 4 and 8 (Results 2)
9:

Search FT=(dealkalization and glass and surfaces and (Carbonated water)) (Results 0)
10:

Search dealkalization and glass and surfaces (Results 7)
11:

Search carbonated and water (Results 5324)
12:

Search 12 and 11 (Results 0)
13:

Search 11 and carbonated (Results 0)
14:

Search 11 and CO2 (Results 0)
15:

Title: Ion exchange in **glass**; treating ceramics.

Abstract: Source: GB1238782A 1,238,782. Ion exchange in **glass**; treating ceramics. S. S. KISTLER. 10 July, 1969 [10 July, 1968], No. 34797/69. Headings C1J and C1M. A first type of positive ion in a **glass** or ceramic material is replaced by a second type of positive ion by placing two opposite **surfaces** of the material in contact with a liquid bath containing said second type of ion, and establishing an alternating current across the material, which is maintained electrically conductive but not molten, the concentration of said second ion in the bath being maintained higher than that of the first. The process is preferably at less than 250° C., the current being alternated at intervals of 5 seconds to 60 minutes. Alkali metal ions in the **glass** (or ceramic), e.g. Li or Na, may be replaced by larger alkali metal ions, e.g. Na, K, Rb or Cs, to effect ion exchange strengthening, or by hydrogen ions to effect **dealkalization**. Alternatively, ions other than alkali or alkaline earth metals may be introduced so as to effect "cementation," e.g. so as to colour the surface. In examples, **glass** (two examples of compositions given) is treated with molten KSCN or a KNO₃/Ca(NO₃)₂ mixture, or with a solution of KSCN in, e.g. acetamide, dimethylformamide, diethyl acetamide or propylene carbonate. Porcelain made by firing at 1200° C. 35 (weight) per cent ball clay, 35 percent sodium feldspar and 30 percent quartz may be treated with molten eutectic mixture of KNO₃ and Ca(NO₃)₂. In a modification of the process each opposite surface of the material may be treated with a bath containing a different second type of ion.

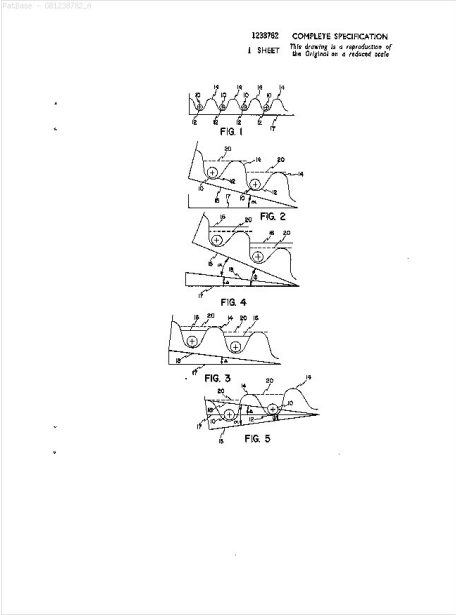
Classifications:

International (IPC 8-9): C03C21/00 C04B41/00 (Advanced/Invention); C03C21/00 C04B41/00 (Core/Invention)

International (IPC 1-7): C03C21/00 C04B41/00 C04B41/06

CPC: C03C21/001 C03C21/003 C03C21/006 C04B41/00 C04B41/009

European: C03C21/00B C03C21/00B2B C03C21/00B6 C04B41/00 C04B41/00V



Family:

Publication number	Publication date	Application number	Application date
CA944957 A1	19740409	CA19690056580	19690709
DE1936803 A1	19710211	DE19691936803	19690719
FR2012668 A1	19700320	FR19690023410	19690709
GB1238782 A	19710707		19690710
SE355794 B	19730507	SE19690009776	19690709

Priority:

US19680743851 19680710

Probable Assignee: UNIV UTAH

Assignee(s): (std): UNIV UTAH

Assignee(s): UNIVERSITY OF UTAH ; UNIVERSITY OF UTAH US ; KISTLER SAMUEL S ; OF UTAH UNIV ; THE UNIVERSITY OF UTAH SALT LAKE CITY

Inventor(s): (std): KISTLER S ; KISTLER SAMUEL S ; S KISTLER PROF SAMUEL

Inventor(s): KISTLER S US

Title: **DEALKALIZATION** OF **GLASS SURFACES**

Abstract: Source: US3653864A This invention relates to the improvement in surface durability of alkali metal oxide containing **glasses** through the removal of the alkali metal oxide by a treatment which comprises hydrating the alkali metal oxide containing **glass** in an autoclave, and thereafter dealkalyzing the **glass** surface by contacting it, at a moderate temperature, with a non-acidic non-aqueous solvent having a high dielectric constant. The resultant surface has substantially improved chemical surface durability.

Classifications:

International (IPC 8-9): C03C21/00 C03C23/00 (Advanced/Invention);
C03C21/00 C03C23/00 (Core/Invention)

International (IPC 1-7): C03C15/00 C03C23/00

CPC: C03C21/001 C03C23/00

European: C03C21/00B C03C23/00

US: 117/124 117/54 156/134 156/15 156/2 156/24 216/87 216/99 65/30.12 65/300 65/31 65/310 65/32.4 65/320

Family:

Publication number	Publication date	Application number	Application date
US3653864 A	19720404	US19690807984	19690317

Priority:

US19690807984 19690317

Probable Assignee: CORNING GLASS WORKS

Assignee(s): (std): CORNING GLASS WORKS

Inventor(s): (std): ROTHERMEL DAPHNE L ; STOOKEY STANLEY D

Inventor(s): DAPHNE L ROTHERMEL ; STANLEY D STOOKEY

Title: COATING COMPOSITION

Abstract: Source: JP55110164A **PURPOSE:** A coating composition that contains silicic acid and alkyltrialkoxysilane dissolving in an organic solvent, thus improving the plastic **surfaces** in various kinds of properties, e.g., hardness, solvent resistance or antistatic properties. **CONSTITUTION:** The objective composition consists of (A) silicic acid dissolved in an organic solvent and (B) an alkyltrialkoxysilane, e.g., methyltriethoxysilane. The component A is generally obtained by extracting a solution resulting from neutralization or **dealkalization** of water **glass** shown as $n\text{SiO}_2 \cdot A_2\text{O}$ (n is a positive number; A is Na or K) with an organic solvent. **EFFECT:** The coating films with excellent performance are obtained at relatively low temperature without hydrolysis step that requires complicated and delicate controls.

Classifications:

International (IPC 8-9): C09D1/00 C09D1/04 C09D183/00 (Advanced/Invention);
C09D1/00 C09D183/00 (Core/Invention)
International (IPC 1-7): C09D1/00 C09D1/04 C09D3/82

Family:

Publication number	Publication date	Application number	Application date
JP55110164 A2	19800825	JP19790017254	19790219

Priority:

JP19790017254 19790219

Probable Assignee: ASAHI DOW LTD

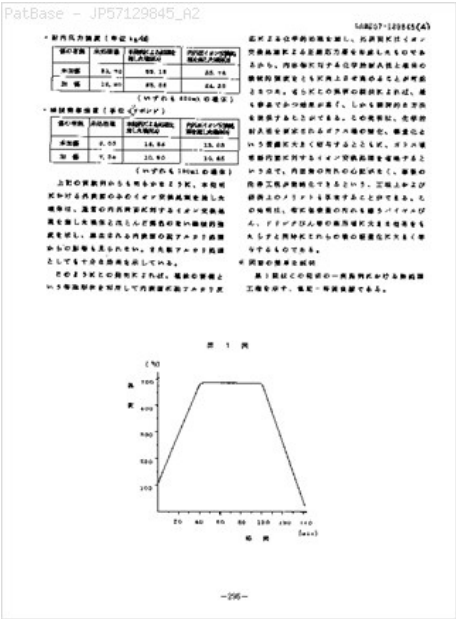
Assignee(s): (std): ASAHI DOW LTD

Inventor(s): (std): KOMIYA KIYOUSUKE ; YAMAGUCHI MASAMI

Title: GLASS BOTTLE PROVIDED WITH BOTH MECHANICAL STRENGTH AND CHEMICAL DURABILITY AND ITS MANUFACTURE

Abstract: Source: JP57129845A PURPOSE: To obtain a glass bottle provided with both mechanical strength and chemical durability by simultaneously subjecting the outer surface of a glass bottle to ion exchange and the inner surface to dealkalization. CONSTITUTION: In order to ion-exchange only the outer surface of a molded matrix glass bottle after a slow cooling process, a high concn. aqueous soln. of a salt mixture of potassium chloride with potassium nitrate or the like is applied to the outer surface. In order to dealkalize the inner surface of the bottle, gaseous SO₂, ammonium chloride, ammonium sulfate or the like is charged into the bottle. This bottle is shifted into a heat treating furnace heated to a temp. at which it is not damaged, and heat treatment is carried out as shown by the diagram. Thus, separate reactions proceed on the inner and outer surfaces. At this time, the furnace is filled with gaseous SO₂ for the dealkalization, yet when the ion exchange proceeds simultaneously, unfavorable influence is hardly exerted on the ion exchange.

Classifications:
International (IPC 8-9): C03C21/00 C03C23/00 (Advanced/Invention)
International (IPC 1-7): C03C21/00 C03C23/00



Family:

Publication number	Publication date	Application number	Application date
JP1668530 C3	19920529	JP19810012030	19810129
JP3023494 B4	19910329	JP19810012030	19810129
JP57129845 A2	19820812	JP19810012030	19810129

Priority:

JP19810012030 19810129

Probable Assignee: NIHON TAISANBIN KOGYO KK

Assignee(s): (std): NIHON TAISANBIN KOGYO KK

Assignee(s): NIPPON TAISANBIN KOGYO KK

Inventor(s): (std): MIZUTANI YOSHIO ; OOKURA NOBUAKI

Title: Alkali removal from glass surfaces - by treatment with wet nitrogen, sulphur tri:oxide and then dry nitrogen

Abstract: Source: DE4034236A1 In the dealkalislation of glass surfaces of continuously moving hot glass strip or of glass sheets during further processing (e.g. thermal pre-stressing) by treatment with SO3 formed by reaction of dry SO2 and dry air over a V2O5 catalyst, the novelty is that the air:SO2 vol. throughput ratio is 7.5-15 and that the glass surface is pre-treated with a N2/H2O mixt. and post-treated with dry N2. Pref. the N2/H2O mixt. contains 0.5-2.5 vol. percent H2O. The vol. throughput of N2 in the N2/H2O mixt. and in the pure N2 is pref. 2-5 times the vol. throughput of air required for SO3 formation. USE/ADVANTAGE - The process is useful for treating soda-lime flat glass. It is inexpensive, has reduced noxious emissions and has no negative effect on the prodn. process and the glass (surface) properties.

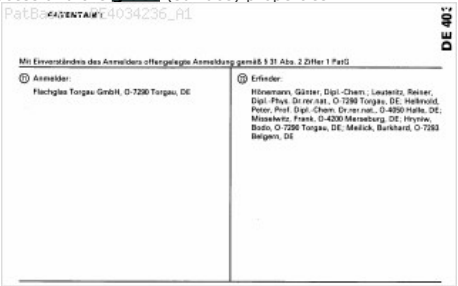
Classifications:

International (IPC 8-9): C03C21/00 (Advanced/Invention);
C03C21/00 (Core/Invention)

International (IPC 1-7): C03C23/00

CPC: C03C21/007

European: C03C21/00C



Family:

Publication number	Publication date	Application number	Application date
DE4034236 A1	19910411	DE19904034236	19901027

Priority:

DE19904034236 19901027

Probable Assignee: TORGAU FLACHGLAS

Assignee(s): (std): FLACHGLAS TORGAU GMBH ; TORGAU FLACHGLAS

Assignee(s): FLACHGLAS TORGAU GMBH O 7290 TORGAU DE

Inventor(s): (std): HELLMOLD PETER PROF DIPL CHEM ; HOENEMANN GUENTER DIPL CHEM ; HRYNIW BODO ; LEUTERITZ REINER DIPL PHYS DR ; MEILICK BURKHARD ; MISSELWITZ FRANK

Inventor(s): MISSELWITZ FRANK O 4200 MERSEBURG DE ; MEILICK BURKHARD O 7293 BELGERN DE ; LEUTERITZ REINER DIPL PHYS DR RER NAT ; LEUTERITZ REINER DIPL PHYS DR RER NAT O 7290 TORGA ; HRYNIW BODO O 7290 TORGAU DE ; HELLMOLD PETER PROF DIPL CHEM DR RER NAT ; HELLMOLD PETER PROF DIPL CHEM DR RER NAT O 4050 HA

Title: SUBSTRATE FOR INFORMATION RECORDING MEDIA AND MANUFACTURING METHOD THEREOF, AND INFORMATION RECORDING MEDIUM

Abstract: Source: US2003109202A There are provided a substrate for information recording media and a manufacturing method thereof, according to which the projection height of minute undulations formed on the substrate **surfaces** can be made more uniform, and variation in the projection density can be suppressed. First, chemical strengthening treatment is carried out on a **glass** substrate that has been prepared by processing a sheet-shaped starting material **glass** plate into a predetermined shape. Then, precision polishing is carried out on the **glass** substrate that has been subjected to the chemical strengthening treatment, such that a polishing amount in a thickness direction of the **glass** substrate is within a predetermined range. Finally, surface washing is carried out on the **glass** substrate that has been subjected to said precision polishing.

Classifications:

International (IPC 8-9): B24B1/00 C03C19/00 G11B5/73

G11B5/84 (Advanced/Invention);

G11B23/50 G11B5/82 (Advanced/Non-invention)

International (IPC 1-7): B24B1/00 G11B5/73 G11B5/84

CPC: G11B5/8404 B24B37/048 C03C15/00 C03C19/00 C03C2204/08 G11B5/82

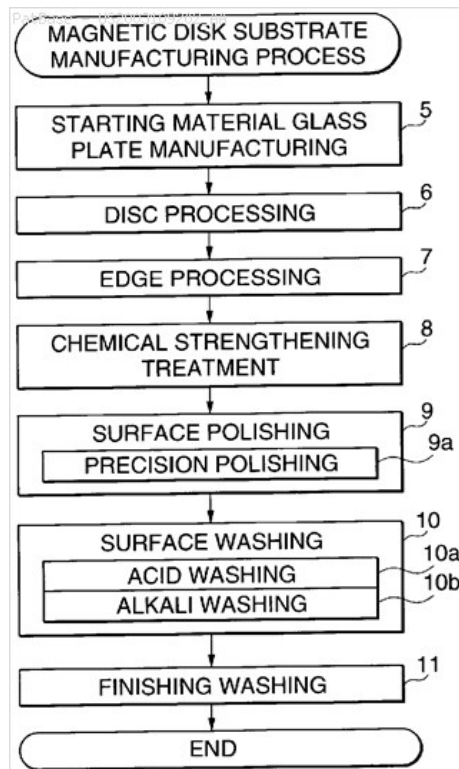
G11B23/50

European: B24B37/04F C03C15/00 C03C19/00 G11B5/84B M03C204/08 S11B23/50

S11B5/82

US: 451/28 451/41 451/41P 451/5 451/54 451/54S 65/61 G9B/005.299 G9B/5.299

G9B/5.299S



Family:

Publication number	Publication date	Application number	Application date
JP2003036528 A2	20030207	JP20010224545	20010725
JP4185266 B2	20081126	JP20010224545	20010725
MY128611 A	20070228	MY20020002814	20020725
US2003109202 AA	20030612	US20020205073	20020725
US7040953 BB	20060509	US20020205073	20020725

Priority:

JP20010224545 20010725

Probable Assignee: HOYA CORP

Assignee(s): (std): HOYA CORP ; NIPPON SHEET GLASS CO LTD

Assignee(s): NIPPON SHEET GLASS CO

Inventor(s): (std): KURACHI JUNJI ; MATSUNO KENSUKE ; WATANABE TAKEO

Inventor(s): TAKEO WATANABE ; JUNJI KURACHI ; KENSUKE MATSUNO

Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

Title: WAY OF REFINING SILICA-SODIUM-CALCIUM GLASS SURFACE WITH ALUMINIUM COMPOUNDS

Abstract: The way, as per the invention, means activation of the glass surface before refining by de-alkalizing the formed product in 80 to 100 degrees centigrade distilled water bath for a period of 15 to 60 minutes. To the surface prepared in such a way, aluminium compounds nanopowder of 1 to 120 nm (preferably Al.(OH)3) is applied and then the product undergoes heat treatment: heating up and keeping at a transformation temperature range 580 +- 150 degrees centigrade, not exceeding the deformation temperature and final annealing to temperature values below 200 degrees centigrade

Classifications:

International (IPC 8-9): C03C17/22 C03C21/00 (Advanced/Invention)

CPC: C03C21/008

Family:

Publication number	Publication date	Application number	Application date
PL404292 A1	20141222	PL20130404292	20130611
WO14200371 A1	20141218	WO2014PL00062	20140611

Priority:

PL20130404292 20130611

Probable Assignee: OPAS PIOTR

Assignee(s): (std): OPAS PIOTR ; WASYLAK JAN

Inventor(s): (std): OPAS PIOTR ; WASYLAK JAN

Agent(s): TABOR KMIECIK KATARZYNA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Search history

Search 1: FT=(method and glass and surface and Dealkalization and (carbonic acid)) (Results 19)

Title: Reversible electrolytic system for softening and dealkalinizing water

Abstract: Source: US4671863A System for softening and dealkalinizing water by feeding said water to both chambers of an electrolytic cell which chambers are separated by a cation exchange membrane, applying DC voltage to the electrodes of the cell, at intervals, reversing the applied polarities, and drawing soft dealkalinized water from the anodic compartments.

Classifications:

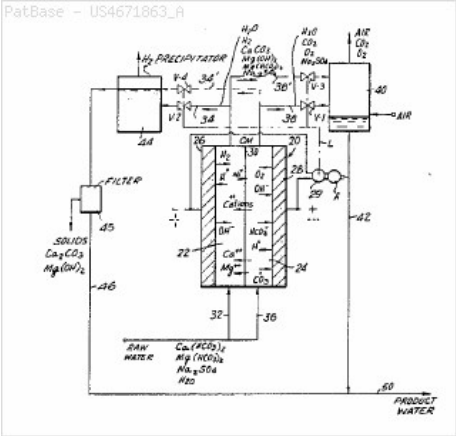
International (IPC 8-9): B01D61/42 C02F1/46 C02F1/469 (Advanced/Invention);
C02F1/00 C02F1/20 (Advanced/Non-invention);
B01D61/42 C02F1/46 C02F1/469 (Core/Invention);
C02F1/00 C02F1/20 (Core/Non-invention)

International (IPC 1-7): B01D13/02 C23B13/00

CPC: B01D61/46 B01D2311/2642 B01D2321/223 C02F1/001 C02F1/20 C02F1/4602
C02F1/4604 C02F1/469 C02F2201/4611 C02F2201/46115 C02F2201/4613
C02F2201/46185

European: B01D61/46 C02F1/469 C02F1/46E L01D311/26L L01D321/22B M02F1/00D
M02F1/20 M02F1/46C M02F201/461B12B M02F201/461B2 M02F201/461B4
M02F201/461B6B2

US: 204/101 204/151 204/266 204/301 204/638 204/87 205/464 205/480 205/555
205/635



Family:

Publication number	Publication date	Application number	Application date
US4671863 A	19870609	US19850792203	19851028

Priority:

US19850792203 19851028

Probable Assignee: TEJEDA ALVARO R

Assignee(s): (std): TEJEDA ALVARO R

Assignee(s): PAULINA RIELOFF TEJEDA ; PAULINA RIELOFF TEJEDA (50 PERCENT) ; PAULINA RIELOFF TEJEDA 50 PERCENT

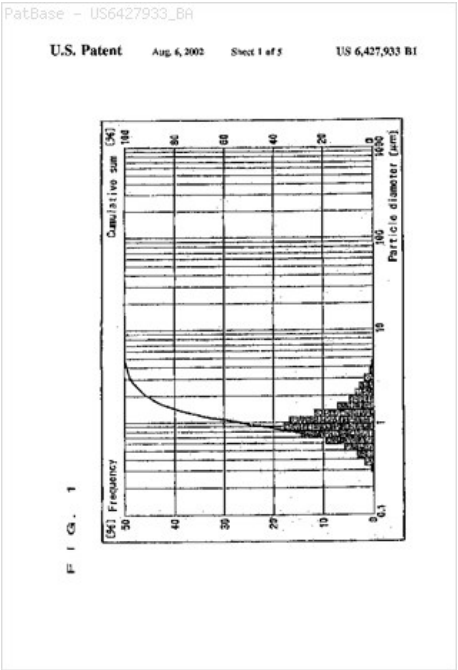
Inventor(s): (std): TEJEDA ALVARO R

Title: **Method** for manufacturing crystalline superfine silk powder

Abstract: Source: US6427933B The main theme of the invention is to provide a **method** for manufacturing industrially, by mechanically comminuting silk yarn, crystalline silk fibroin powder below 3 μm in an average particle diameter, which can be used for various applications. A silk substance such as cocoon filament, silk yarn, or raw silk is brought into an alkali aqueous solution under a pressure of 1 through 5 atmospheric pressure at temperatures from 100 degrees centigrade through 150 degrees centigrade to reduce the tensile strength of the silk substance to around 0.02 g/d or less. Thereafter, the resultant silk substance is subjected to **dealkalization** and drying. Subsequently, the resultant dried silk substance is comminuted into powder below 3 μm in an average particle diameter. Thus, the crystalline silk fibroin powder below 3 μm in an average particle diameter is manufactured.

Classifications:

International (IPC 8-9): B29B13/10 B29B9/12 C08H1/00 C08J3/12 C08L89/00 D01C3/00 (Advanced/Invention); D01C3/00 (Advanced/Non-invention); B29B13/10 B29B9/12 C08H1/00 C08J3/12 C08L89/00 (Core/Invention)
International (IPC 1-7): A61K7/021 A61K7/035 B02C21/00 B29B13/10 B29B9/12 C08H1/00 C08J3/12 C08L89/00
CPC: C08H1/00 C08J3/12 C08J2389/00
European: C08H1/00 C08J3/12 M08J389/00
US: 241/21 241/25 241/29



Family:

Publication number	Publication date	Application number	Application date
CN1122068 C	20030924	CN19998001632	19991221
CN1296505 A	20010523	CN19998001632	19991221
DE69923853 D1	20050331	DE19996023853	19991221
DE69923853 T2	20050714	DE19996023853T	19991221
EP1116743 A1	20010718	EP19990959957	19991221
EP1116743 A4	20021120	EP19990959957	19991221
EP1116743 B1	20050223	EP19990959957	19991221
JP2001048989 A2	20010220	JP19990259149	19990913
JP3362778 B2	20030107	JP19990259149	19990913
KR100393832 B1	20030806	KR20007003059	20000322
KR20010052075 A	20010625	KR20007003059	20000322
US6427933 BA	20020806	US20000509616	20000328
WO0075219 A1	20001214	WO1999JP07197	19991221

Priority:

JP19990157178 19990603 JP19990259149 19990913 WO1999JP07197 19991221

Probable Assignee: NATIONAL INST OF AGROBIOLOGICAL SCIENCES

Assignee(s): (std): NAT INST OF SERICULTURAL AND E ; JP NAT INST OF SERICULTURAL AN ; NAT INST OF AGROBIOLOGICAL SCI ; NAT INST OF AGROBIO SCIENCES ; AGENCY IND SCIENCE TECHN ; AGRICULTURAL BIOLOG RESOURCE R ; TSUBOUCHI KOZO ; NATL INST OF SERICULTURAL AND EN ; NATL INST OF SERICULTURAL AND ENTOMOLOGICAL SCIENC

Assignee(s): NATL INST OF SERICULTURAL AND ENTOMOLOGICAL SCIENCE ; AGRICULTURAL BIOLOGICAL RESOURCE RESEARCH INST ; JAPAN AS REPRESENTED BY DIRECTOR GENERAL OF NATION ; JAPAN AS REPRESENTED BY DIRECTOR GENERAL OF NATIONAL INSTITUTE OF SERICULTURAL AND ENTOMOLOGICAL SCIENCE MINISTRY OF AGRICULTURE FORESTRY AND FISHERIES ; JAPAN AS REPRESENTED BY DIRECTOR OF NATIONAL INSTI ; NATIONAL INST OF AGROBIOLOGICAL SCIENCES ; JAPAN REPRESENTED BY DIRECTOR OF NATIONAL INST OF ; JAPAN REPRESENTED BY DIRECTOR GENERAL OF NATIONAL ; NATIONAL INST ; NATIONAL INSTITUTE OF AGROBIOLOGICAL SCIENCES ; NATIONAL INSTITUTE OF AGROBIOLOGICAL SCIENCES TSUK ; JAPAN AS REPRESENTED BY DIRECTOR OF NATIONAL INSTITUTE OF SERICULTURAL AND ENTOMOLOGICAL SCIENCE MINISTRY OF AGRICULTURE FORESTRY AND FISHERIES ; NATIONAL INSTITUTE OF AGROBIOLOGICAL SCIENCES TSUKUBA

Inventor(s): (std): KOZO TSUBOUCHI ; TSUBOUCHI KOZO

Designated states: AT BE CH CN CY DE DK ES FI FR GB GR IE IN IT KR LI LU MC NL PT SE US

Title: Cosmetic material containing crystalline superfine silk powder

Abstract: Source: US6719985B The invention provides a cosmetic material containing a crystalline superfine silk powder that has the original structure of silk yarn, properties such as an unique gloss, feeling of touch, flexibility, and elasticity; and various properties such as excellent coating power, spreadability, adhesion, feeling of touch, and formability, which are required of an extender powder or color material of cosmetics. The cosmetic material contains a colored crystalline superfine silk powder obtained by the steps of bringing a silk substance into contact with an alkali aqueous solution at temperatures ranging from 100 degrees centigrade to 150 degrees centigrade under a pressure ranging from 1 through 5 atmospheric pressures to weaken the silk substance to not greater than 0.02 g/d in tensile strength, dealcalizing and drying the silk substance powdering the silk substance into a crystalline superfine silk powder below 3 μm in average particle diameter, and dyeing the crystalline superfine silk powder with a natural or synthetic color material, or mixing the crystalline superfine silk powder with a natural or synthetic color material.

Classifications:

International (IPC 8-9): A61K8/00 A61K8/64 A61K8/96 A61Q1/00 A61Q1/06 A61Q1/12 A61Q19/00 (Advanced/Invention);

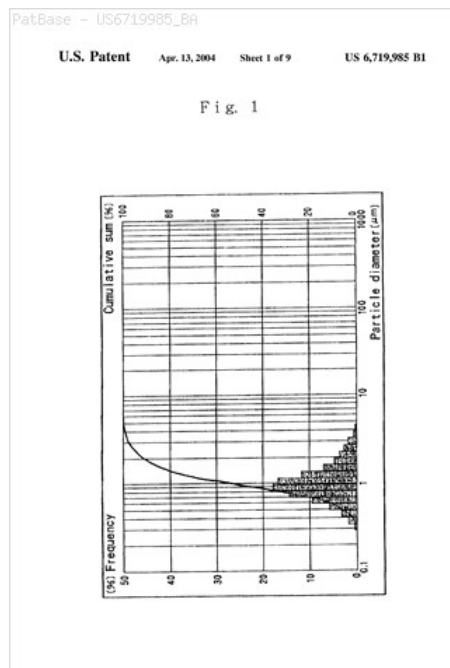
A61K8/00 A61K8/30 A61K8/96 A61Q1/02 A61Q1/12 A61Q19/00 (Core/Invention)

International (IPC 1-7): A61K 101/00 A61K07/00 A61K101/00 A61K6/00 A61K7/00 A61K7/02 A61K7/06 A61K7/48 A61K9/00 A61K9/14 C08J3/12

CPC: A61K8/64 A61Q1/06 A61Q1/12

European: A61K8/64 A61Q1/06 A61Q1/12

US: 424/400 424/401 424/489 424/70.1 424/701



Family:

Publication number	Publication date	Application number	Application date
CN1158985 C	20040728	CN20008001388	20000301
CN1317957 A	20011017	CN20008001388	20000301
DE60042999 D1	20091105	DE20006042999	20000301
EP1110534 A1	20010627	EP20000906593	20000301
EP1110534 A4	20060208	EP20000906593	20000301
EP1110534 B1	20090923	EP20000906593	20000301
JP2001026517 A2	20010130	JP19990198233	19990712
JP3505677 B2	20040308	JP19990198233	19990712
TH53880 A	20021118	TH20001002497	20000706
US6719985 BA	20040413	US20010762372	20010202
WO0103654 A1	20010118	WO2000JP01191	20000301

Priority:

JP19990198233 19990712 WO2000JP01191 20000301

Probable Assignee: NATIONAL INST OF AGROBIOLOGICAL SCIENCES

Assignee(s): (std): JAPAN REPRES BY DIR GEN OF AS ; TSUBOUCHI KOZO ; NATL INST OF SERICULTURAL AND EN ; OODOREMAN KK ; JP NAT INST OF SERICULTURAL AN ; NAT INST OF AGROBIO SCIENCES ; EAUDELEMAN CO LTD ; FUJIURA SHOKO ; INST OF AGRICULTURAL BIOLOG RE ; JAPAN AS REPRES BY DIR GEN OF

Assignee(s): JAPAN AS REPRESENTED BY DIRECTOR GENERAL OF NATION ; JAPAN AS REPRESENTED BY DIRECTOR GENERAL OF NATIONAL INST OF SERICULTURAL AND ENTOMOLOGICAL SCIENCE MINISTRY OF AGRICULTURE FORESTRY AND FISHERIES ; EAUDELEMAN CO ; INST OF AGRICULTURAL BIOLOGICAL RESOURCES ; JAPAN REPRESENTED BY DIRECTOR GENERAL OF NATIONAL ; NATIONAL INST OF AGROBIOLOGICAL SCIENCES ; NATIONAL INSTITUT ; KOZO TSUBOUCHI ; NATIONAL INST ; NATIONAL INSTITUTE OF AGROBIOLOGICAL SCIENCES ; NATL INST OF SERICULTURAL AND ENTOMOLOGICAL SCIENC ; NATIONAL INSTITUTE OF AGROBIOLOGICAL SCIENCES TSUKUBA ; NATL INST OF SERICULTURAL AND ENTOMOLOGICAL SCIENCE ; JAPAN AS REPRESENTED BY DIRECTOR GENERAL OF NATIONAL INSTITUTE OF SERICULTURAL AND ENTOMOLOGICAL SCIENCE MINISTRY OF AGRICULTURE FORESTRY AND FISHERIES

Inventor(s): (std): FUJIURA SHIYOUKO ; FUJIURA SHOKO ; KOZO TSUBOUCHI ; SHOKO FUJIURA ; TSUBOUCHI KOZO

Inventor(s): FUJIURA SHOKO EAUDELEMAN CO LTD

Agent(s): GODDAR HEINZ J

Designated states: AT BE BR CH CN CY DE DK ES FI FR GB GR IE IN IT KR LU MC NL PT SE US VN

Title: AQUEOUS ADHESIVE DISPERSIONS

Abstract: Source: US2005131109A An aqueous polymer dispersion that includes a) a polyurethane dispersion having an average particle size of 60 to 350 nm and b) an aqueous silicon dioxide dispersion having a particle diameter of the SiO₂ particles of 20 to 400 nm. The dispersion is prepared by mixing the polyurethane dispersion (a) with the silicon dioxide dispersion (b). The aqueous polymer dispersion can be used in adhesive compositions, which can be used to bond substrates together, especially substrates that are structural components of shoes.

Classifications:
International (IPC 8-9): A43B1/00 B60C1/00 B82B1/00 C08G18/08 C08G18/70 C08J3/02 C08K3/34 C08K3/36 C08L75/04 C09J11/04 C09J175/04 C09J175/06 (Advanced/Invention);
C08J3/02 C08K3/36 C08L75/04 C09J175/06 (Advanced/Non-invention);
A43B1/00 B82B1/00 C08G18/00 C08J3/02 C08K3/00 C08L75/00 C09J11/02 C09J175/04 C09J175/06 (Core/Invention);
C08G C08K C09J (Subclass/Invention)
International (IPC 1-7): C08G18/08 C08J5/10 C08K3/20 C08K3/34 C08K3/36 C08K5/5415 C08L75/04 C09D5/02 C09J175/04 C09J175/06
CPC: C08G18/706 C08G2170/80
European: C08G18/70K5D M08G170/80
US: 523/334 524/261 524/492 524/493 524/493S 524/589 524/589S 524/591 524/839

Family:

Publication number	Publication date	Application number	Application date
AT448284 E	20091115	AT20040764880T	20040907
AU2004280361 AA	20050421	AU20040280361	20040907
AU2004280361 BB	20100923	AU20040280361	20040907
CA2538956 AA	20060313	CA20042538956	20040907
CA2538956 C	20130115	CA20042538956	20040907
CN100475925 C	20090408	CN200480027048	20040907
CN1852961 A	20061025	CN200480027048	20040907
DE10343675 A1	20050414	DE20031043675	20030918
DE502004010359 D1	20091224	DE200450010359T	20040907
EP1664227 A1	20060607	EP20040764880	20040907
EP1664227 B1	20091111	EP20040764880	20040907
ES2334572 T3	20100312	ES20040764880T	20040907
HK1097290 A1	20091211	HK20070104219	20070423
HK1097290 A3	20070622	HK20070104219	20070423
IN00898DN2006 A	20070810	IN2006DN00898	20060221
JP2007533779 T2	20071122	JP20060526549T	20040907
JP4933895 B2	20120516	JP20060526549T	20040907
KR101158133 B1	20120619	KR20067005374	20040907
KR20060083210 A	20060720	KR20067005374	20040907
MXPA06002937 A1	20060531	MX2006PA02937	20040907
RU2006112558 A	20071110	RU20060112558	20040907
RU2366679 C2	20090910	RU20060112558	20040907
TW200524999 A	20050801	TW20040128098	20040917
TWI382073 B	20130111	TW20040128098	20040917
UA84168 C2	20080925	UA20060004370	20040907
US2005131109 AA	20050616	US20040939803	20040913
US8114931 BB	20120214	US20040939803	20040913
WO05035684 A1	20050421	WO2004EP09933	20040907

Priority:
DE20031043675 20030918 WO2004EP09933 20040907

Probable Assignee: BAYER MATERIALSCIENCE AG

Assignee(s): (std): ARNDT WOLFGANG ; BAJER MATIRIAL SAJENS AG ; BAYER MATERIAL SCIENCE LLC ; BAYER MATERIALSCIENCE AG ; HENNING WOLFGANG ; MUSCH RUEDIGER ; PANSKUS KNUT ; RISCHE THORSTEN ; WERNER RALF

Assignee(s): MUSCH RUDIGER

Inventor(s): (std): HENNING WOLFGANG ; KHENNING VOL FGANG ; KNUT PANSKUS ; MUSCH RUDIGER ; MUSCH RUEDIGER ; MUSH RJUDIGER ; PANSKUS KNUT ; RALF WERNER ; RISCHE THORSTEN ; RISHE TORSTEN ; RUDIGER MUSCH ; THORSTEN RISCHE ; VERNER RAL F ; WERNER RALF ; WOLFGANG ARNDT ; WOLFGANG ARNDT WOLFGANG MUSCH ; WOLFGANG HENNING ; ARNDT VOL FGANG ; ARNDT WOLFGANG ; RUEDIGER MUSCH

Inventor(s): ARNDT WOLFGANG MUSCH RUEDIGER PANSKUS KNUT... ; ARNDT WOLFGANG MUSCH RUEDIGER PANSKUS KNUT RISCHE ; VERNER RAL'F ; KHENNING VOL'FGANG ; ARNDT VOL'FGANG

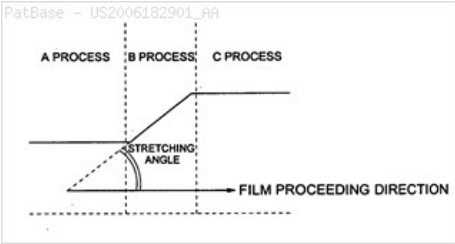
Agent(s): DAVIES COLLISON CAVE; NORTON ROSE CANADA SENCRL SRL LLP; OGILVY RENAULT LLP SENCRL SRL; BAYER MATERIAL SCIENCE LLC; ROBERT S; NOLAND J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: STRETCHED CELLULOSE ESTER FILM, HARD COAT FILM, ANTIREFLECTIVE FILM, AND OPTICAL COMPENSATION FILM, AND POLARIZING PLATE, AND DISPLAY DEVICE USING THEM

Abstract: Source: US2006182901A In a stretched cellulose ester film containing a plasticizer, the plasticizer includes at least an aromatic terminal ester type plasticizer expressed by the following general formula (1): and stretched cellulose ester film includes a cellulose ester having a total acyl substitution degree of 2.4 to 2.9, a number average molecular weight (Mn) of 30000 to 200000, and a value of a weight-average molecular weight (Mw)/a number average molecular weight (Mn) being 1.4 to 3.0, B-(G-A)n-G-B General formula (1) where B represents a benzenemonocarboxylic acid residue, G represents an alkylene glycol residue having a carbon number of 2 through 12 or an oxyalkylene glycol residue having a carbon number of 4 through 12, A represents an alkylene dicarboxylic acid residue having a carbon number of 4 to 12, and n indicates an integer of 0 or more.

Classifications:
International (IPC 8-9): B29C55/00 B29C55/02 B29D7/01 B32B23/04 B32B23/08 B32B23/16 B32B23/20 C08J5/18 C08K5/10 C08K5/103 C08K5/11 C08L1/10 C09K19/00 G02B1/10 G02B1/11 G02B5/30 G02F1/1335 G02F1/13363 (Advanced/Invention); B29C55/00 B29K1/00 B29L7/00 C08J5/18 C08K5/103 C08K5/11 C08L1/10 (Advanced/Non-invention); B29C55/00 B29C55/02 B32B23/00 C08J5/18 C08K5/00 C08L1/00 C09K19/00 G02B5/30 G02F1/13 (Core/Invention)
International (IPC 1-7): B29C55/02 B29D7/01 B29K5/11 B32B23/20 C08J5/18 C08K5/103 C08K5/11 C08L1/10 G02B1/10 G02B5/30 G02F1/1335 G02F1/3363
CPC: Y10T428/1041 Y10T428/105 C08J5/18 B29C55/005 B29K2001/00 B29K2001/12 C08J2301/10 Y10T428/31971
European: B29C55/00B C08J5/18 L29K1/00 L29K1/12 M08J301/10
US: 106/182.1 106/184.3 106/186.2 428/1.31 428/1.310P 428/1.33 428/220 428/220S 428/532 428/532S 428/910 428/910S



Family:

Publication number	Publication date	Application number	Application date
CN100497448 C	20090610	CN200480030341	20041214
CN1867620 A	20061122	CN200480030341	20041214
JP5038625 B1	20121003	JP20050516482T	20041214
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KR101142628 B1	20120510	KR20067007221	20041214
KR20060108613 A	20061018	KR20067007221	20041214
TW200533510 A	20051016	TW20040138991	20041215
TWI367160 B	20120701	TW20040138991	20041215
US2006182901 AA	20060817	US20060403340	20060413
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WO05061595 A1	20050707	WO2004JP18977	20041214

Priority:
JP20030426549 20031224 WO2004JP18977 20041214 JP20050516482 20041214

Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; TAKAGI TAKAHIRO

Inventor(s): (std): TAKAGI TAKAHIRO ; TAKAHIRO TAKAGI

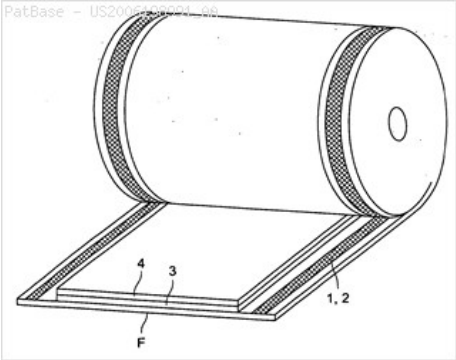
Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: PRODUCTION **METHOD** OF ROLLED OPTICAL FILM HAVING COATING LAYER, ROLLED OPTICAL FILM, POLARIZING PLATE AND LIQUID CRYSTAL DISPLAY

Abstract: Source: US2006198991A A **method** for producing a roll film provided with a coat layer comprising the steps of: (i) producing a roll film; (ii) applying a first embossing treatment along a longitudinal direction of the roll film on a part of a lateral direction of the roll film; (iii) applying a coat layer on the roll film; (iv) applying a second embossing treatment along a longitudinal direction of the roll film on a part of a lateral direction of the roll film; (v) heat treating the roll film at a temperature of 50 to 150 degrees centigrade for a duration of 1 to 30 days while the roll film is rolled in a roll.

Classifications:
International (IPC 8-9): B32B7/02 G02B1/10 G02B5/30 G02F1/1335 B05D7/04 B28B11/08 B29C59/00 B29C59/04 B32B3/00 C08J5/18 G02B1/11 G02F1/13 (Advanced/Invention); B05D7/04 B28B11/08 B29C59/00 B29C59/04 G02B1/10 G02B5/30 G02F1/13 (Core/Invention)
CPC: Y10T428/24355 Y10T428/24612 B32B3/02 B29C39/18 B29C41/24 B29C59/04 B29C67/0044 B29C2791/001 B29K2001/00 B29K2001/12 B29K2995/003 B29L2007/008 B29L2009/00 B29L2011/00 B65H18/00 B65H37/00 B65H2301/5126 B65H2701/132 B65H2701/172 B65H2701/1752
European: B29C39/18 B29C41/24 B29C67/00K B32B3/02 B65H18/00 B65H37/00 L29C59/04 L29C791/00B L29K1/00 L29K1/12 L29K995/00E8 L29L11/00 L29L7/00G L29L9/00 L65H301/5126 L65H701/132 L65H701/172 L65H701/1752
US: 264/1.34 264/1.6 264/1.7 264/134 264/284 264/294 427/277 427/278 427/355 427/356 427/365 427/366 428/141 428/141S 428/172 428/172P



Family:

Publication number	Publication date	Application number	Application date
JP2006224607 A2	20060831	JP20050044068	20050221
JP4655663 B2	20110323	JP20050044068	20050221
KR101254336 B1	20130412	KR20060015501	20060217
KR20060093283 A	20060824	KR20060015501	20060217
TW200643065 A	20061216	TW20060105253	20060216
TWI389947 B	20130321	TW20060105253	20060216
US2006198991 AA	20060907	US20060356640	20060217
US7641837 BB	20100105	US20060356640	20060217

Priority:
JP20050044068 20050221

Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC

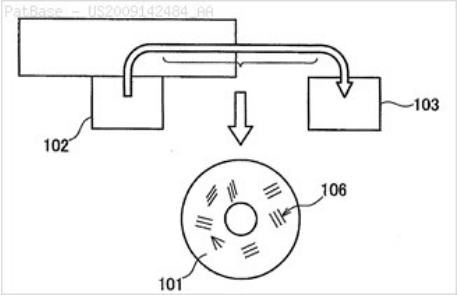
Inventor(s): (std): MIZOGUCHI KOUSEI ; MIZOGUCHI YASUMASA ; SHIMIZU KAZUYUKI ; TAKIYAMA NOBUYUKI

Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

Title: **METHOD** OF MANUFACTURING MAGNETIC-DISK **GLASS** SUBSTRATE AND **METHOD** OF MANUFACTURING MAGNETIC DISK

Abstract: Source: US2009142484A A process for producing a **glass** substrate for magnetic disk through chemical strengthening operation, in which the distribution of compressive stress is uniformed at a **surface** layer portion of the **glass** substrate to thereby, while preventing failures such as head crash and thermal asperity, realize a low flying height of magnetic head, attaining high-density information recording. In particular, the provided **glass** substrate for magnetic disk is suitable for application to compact magnetic disks for portable information equipment. The chemical strengthening operation includes the first step of bringing the **glass** substrate into contact with a first treatment solution (chemical strengthening treatment solution) containing first ions with an ionic radius larger than those of ions within the **glass** substrate and either the second and subsequent steps of bringing the platy **glass** into contact with treatment solutions containing second and subsequent bivalent ions, or the second and subsequent steps of bringing the **glass** substrate into contact with second and subsequent chemical strengthening treatment solutions containing second and subsequent ions exhibiting an ion exchange rate with ions within the **glass** substrate greater than that of the first ions to thereby decelerate the ion exchange.

Classifications:
International (IPC 8-9): B05D5/12 C03C15/00 C03C17/00 C03C21/00 G11B5/00 G11B5/73 G11B5/84 (Advanced/Invention); B05D5/12 C03C21/00 G11B5/62 G11B5/84 (Core/Invention)
International (IPC 1-7): C03C21/00
CPC: G11B5/8404 C03C21/001 C03C21/002
European: C03C21/00B C03C21/00B2 G11B5/84B
US: 427/127 427/127P 427/128 65/30.14 65/60.7



Family:

Publication number	Publication date	Application number	Application date
CN101151224 A	20080326	CN200680010214	20060327
CN101151224 B	20100519	CN200680010214	20060327
JP2006282428 A2	20061019	JP20050102423	20050331
JP2006282429 A2	20061019	JP20050102424	20050331
JP4808985 B2	20111102	JP20050102423	20050331
JP4942305 B2	20120530	JP20050102424	20050331
TH83727 A	20070329	TH20061001494	20060331
US2009142484 AA	20090604	US20060910410	20060327
US2013287938 AA	20131031	US20130933163	20130702
US8499583 BB	20130806	US20060910410	20060327
WO06106627 A1	20061012	WO2006JP306147	20060327

Priority:
JP20050102423 20050331 JP20050102424 20050331 WO2006JP306147 20060327
US20070910410 20071001 US20130933163 20130702

Probable Assignee: HOYA CORP

Assignee(s): (std): HOYA CORP ; ISONO HIDEKI

Inventor(s): (std): HIDEKI ISONO ; ISONO HIDEKI

Agent(s): SUGHRUE MION PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: DISPERSION CONTAINING HOLLOW SiO₂, COATING COMPOSITION AND SUBSTRATE WITH ANTIREFLECTION COATING FILM

Abstract: Source: US2008124539A To provide a dispersion of hollow SiO₂, capable of obtaining, when formed into a coating composition, an antireflection film having high antireflection properties and low chroma saturation by forming a low refractive index coating film having a refractive index gradient. A dispersion of fine silica particles, having agglomerated particles which are agglomerates of primary fine particles of hollow SiO₂ dispersed in a dispersion medium, wherein the average particle size of the agglomerated particles is within a range of from 60 to 400 nm, and the average particle size is at least 1.5 times the average primary particle size of the silica. When a coating composition containing the dispersion is to be obtained, the matrix component is preferably a precursor of a metal oxide or an organic resin. By applying the coating composition to a substrate, a substrate with an antireflection coating film is obtained.

Classifications:
International (IPC 8-9): B05D5/06 B32B7/02 C09D1/00 C09D5/00 C09D7/12 B05D7/24 B32B27/20 B32B5/16 C01B33/113 C01B33/18 C09D17/00 C09D201/00 C09D5/32 G02B1/11 (Advanced/Invention); B05D5/06 B05D7/24 B32B27/20 B32B5/16 B32B7/02 C01B33/00 C09D17/00 C09D201/00 C09D5/00 C09D5/32 C09D7/12 G02B1/10 (Core/Invention); B05D B32B C01B C09D G02B (Subclass/Invention)
CPC: Y10T428/259 C09D7/1291 B82Y30/00 C01B33/14 C01B33/18 C03C17/007 C03C2217/45 C03C2217/478 C08J7/06 C08K7/26 C09D5/00 C09D7/005 C09D7/1266 C09D7/1275 G02B1/111 G02B1/113
European: B82Y30/00 C01B33/14 C01B33/18 C03C17/00D2 C08J7/06 C09D5/00 C09D7/00E C09D7/12N1 C09D7/12N2 C09D7/12S G02B1/11B G02B1/11D M03C217/450 M03C217/478 M08K7/26
US: 106/287.17 106/287.170S 106/287.19 106/287.190S 106/287.34 106/287.340S 428/331 428/331P 524/493 524/493S

Family:

Publication number	Publication date	Application number	Application date
CN101184815 A	20080521	CN200680019039	20060320
CN101184815 B	20101208	CN200680019039	20060320
EP1887059 A1	20080213	EP20060729565	20060320
EP1887059 A4	20081217	EP20060729565	20060320
EP1887059 B1	20140108	EP20060729565	20060320
HK1118304 A1	20110826	HK20080109359	20080821
HK1118304 A3	20090206	HK20080109359	20080821
JP2006335881 A2	20061214	JP20050162487	20050602
JP4883383 B2	20120222	JP20050162487	20050602
TW200704590 A	20070201	TW20060112489	20060407
US2008124539 AA	20080529	US20070947848	20071130
WO06129411 A1	20061207	WO2006JP305597	20060320

Priority:
JP20050162487 20050602 WO2006JP05597 20060320 WO2006JP305597 20060320

Probable Assignee: ASAHI GLASS CO LTD

Assignee(s): (std): ASAHI GLASS CO LTD ; YONEDA TAKASHIGE ; KAWAI YOHEI

Assignee(s): ASAHI GLASS COMPANY LIMITED ; ASAHI GLASS COMPANY LTD ; ASAHI GLASS CO

Inventor(s): (std): TAKASHIGE YONEDA ; YOHEI KAWAI ; YONEDA TAKASHIGE ; KAWAI YOHEI

Inventor(s): KAWAI YOHEI C O ASAHI GLASS CO 115 LTD ; YONEDA TAKASHIGE C O ASAHI GLASS CO LTD

Agent(s): MUELLER-BORE AND PARTNER PATENTANWAELTE; MUELLER BORE AND PARTNER PATENTANWAELTE; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT PC

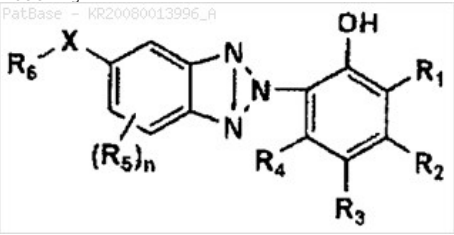
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Title: CELLULOSE ESTER FILM, POLARIZING PLATE AND LIQUID CRYSTAL DISPLAY

Abstract: Source: US2006280882A An object of the present invention is to provide a polarizing plate protective film exhibiting a reduced variation value retardation, which is highly stable against polarizing plate degradation, polarizing plate dimension, and polarizing plate curl. Disclosed is a cellulose ester film possessing cellulose ester, polymer X having a weight average molecular weight of 2000-30000 prepared by copolymerizing ethylenic unsaturated monomer Xa containing no aromatic ring and hydrophilic group within a molecule and ethylenic unsaturated monomer Xb containing no aromatic ring but a hydrophilic group within a molecule, and polymer Y having a weight average molecular weight of 500-3000 prepared by polymerizing ethylenic unsaturated monomer Ya containing no aromatic ring.

Classifications:

International (IPC 8-9): B32B29/00 C08J5/18 C08L1/10 C08L33/08 C08L33/12 C09K19/00 G02B1/10 G02B1/11 G02B5/30 G02F1/1335 G02F1/13363 (Advanced/Invention); C08J5/18 C08L1/10 C08L33/08 C08L33/12 G02B5/30 G02F1/1335 (Advanced/Non-invention); B32B29/00 C08J5/18 C08L1/00 C08L33/00 C09K19/00 G02B5/30 G02F1/13 (Core/Invention); C08L33/00 (Core/Non-invention) **CPC:** Y10T428/1041 Y10T428/105 C08J5/18 C08J2301/10 C08L1/10 C08L1/12 C08L1/14 G02B5/3033 G02F2201/086 Y10T428/31971 G02F1/133528 **European:** C08J5/18 C08L1/10 C08L1/12 C08L1/14 M08J301/10 S02B5/30P1 S02F1/1335P S02F201/08U **US:** 106/171.1 349/96 428/1.31 428/1.310P 428/1.33 428/532 428/532S 525/330.3



Family:

Publication number	Publication date	Application number	Application date
CN101189295 A	20080528	CN200680019955	20060530
CN101189295 B	20101215	CN200680019955	20060530
JP5040651 B1	20121003	JP20070520062T	20060530
JP5040651 B2	20121003	JP20070520062	20060530
KR101310571 B1	20130923	KR20077028303	20060530
KR20080013996 A	20080213	KR20077028303	20060530
TW200712103 A	20070401	TW20060119731	20060602
TW1389948 B	20130321	TW20060119731	20060602
US2006280882 AA	20061214	US20060445580	20060602
US7749578 BB	20100706	US20060445580	20060602
WO06132105 A1	20061214	WO2006JP310719	20060530

Priority:
JP20050168004 20050608 JP20050249041 20050830 WO2006JP310719 20060530
JP20070520062 20060530

Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; TAKEBE TAKASHI ; OKA SHIGEKI ; SHIMIZU KUNIO

Assignee(s): AIRBUS OPERATIONS SAS

Inventor(s): (std): KUNIO SHIMIZU ; OKA SHIGEKI ; SHIGEKI OKA ; SHIMIZU KUNIO ; TAKASHI TAKEBE ; TAKEBE TAKASHI

Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: OPTICAL FILM, PROCESSING **METHOD** OF OPTICAL FILM AND PROCESSING DEVICE OF OPTICAL FILM

Abstract: Source: US2010092780A A processing **method** of an optical film comprising the step of: subjecting a long length roll-film continuously conveyed to a treatment so as to be brought in contact with a processing solution containing at least one type of gas selected from reducing gas and oxidizing gas.

Classifications:

International (IPC 8-9): B01J19/10 B05C1/06 B05D3/10 B32B9/04 C08J7/02

C23C16/52 G02B1/11 (Advanced/Invention);

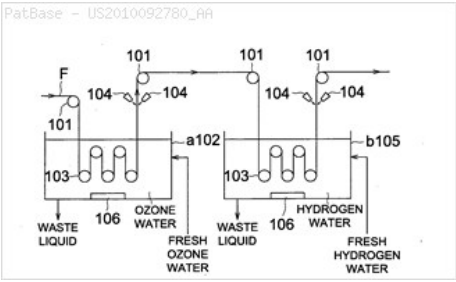
B01J19/10 B05C1/04 B05D3/10 B32B9/04 C08J7/00 C23C16/52

G02B1/10 (Core/Invention)

CPC: Y10T428/31504 G02B1/11 C08J7/02

European: C08J7/02 G02B1/11

US: 118/264 427/337 427/560 427/8 428/411.1



Family:

Publication number	Publication date	Application number	Application date
US2010092780 AA	20100415	US20060989970	20060712
WO07018012 A1	20070215	WO2006JP313822	20060712

Priority:

JP20050230708 20050809 WO2006JP313822 20060712

Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA OPTO INC ; MORINAGA YOSHIKI ; NAKAJIMA KOJI ; NAKASHIMA KOJI ; TANAKA TAKESHI

Inventor(s): (std): MORINAGA YOSHIKI ; NAKAJIMA KOJI ; NAKASHIMA KOJI ; TANAKA TAKESHI

Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

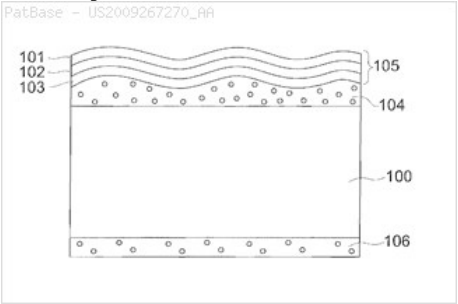
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Title: PROCESS FOR PRODUCING FILM WITH CONCAVO-CONVEX PATTERN

Abstract: Source: US2009267270A The present invention provides a process for producing a concavo-convex pattern film which excels in its peelability from an embossing roll and in coatability of an anti-reflection layer, etc. There is provided a process of producing a concavo-convex pattern film by forming a concavo-convex pattern on the **surface** of a transparent resin film employing an embossing roll having on the **surface** a convex-concavo pattern, characterized in that the embossing roll is made of **glass** and a photocatalyst layer is provided on the **surface** of the embossing roll, characterized in that the process comprises the steps of introducing a UV curable resin composition between the embossing roll and a transparent resin film provided around the embossing roll to form a UV curable resin layer, exposing the UV curable resin layer to UV rays to form a UV cured resin layer having on the **surface** a concavo-convex pattern, the UV rays being emitted from the interior of the embossing roll, and peeling the UV cured resin layer together with the transparent resin film from the embossing roll.

Classifications:

International (IPC 8-9): B29C33/38 B29C39/18 B29C59/04
B29C59/16 (Advanced/Invention);
B29L7/00 B29L9/00 (Advanced/Non-invention);
B29C59/00 B29C59/04 (Core/Invention)
CPC: B29C35/0888 B29C39/148 B29C39/18 B29C59/046 B29C2035/0827
European: B29C35/08M B29C39/14C B29C39/18 B29C59/04L L29C35/08B4
US: 264/447



Family:

Publication number	Publication date	Application number	Application date
JP4888392 B2	20120229	JP20070536423T	20060818
US2009267270 AA	20091029	US20060066614	20060818
WO07034643 A1	20070329	WO2006JP316216	20060818

Priority:

JP20050271737 20050920 WO2006JP316216 20060818 JP20070536423 20060818

Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA OPTO INC ; MURAKAMI TAKASHI ; SHIBUE TOSHIKI ; TANAKA TAKESHI

Inventor(s): (std): MURAKAMI TAKASHI ; SHIBUE TOSHIKI ; TANAKA TAKESHI

Agent(s): LUCAS AND MERCANTI LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: MANUFACTURING **METHOD** OF CELLULOSE ACYLATE FILM, CELLULOSE ACYLATE FILM, POLARIZING PLATE AND LIQUID CRYSTAL DISPLAY

Abstract: Source: US2008057227A A cellulose acylate film manufacturing **method** based on melt-casting film formation technique, the comprising steps of: extruding a cellulose acylate film from a casting die, and sandwiching the cellulose acylate film between an elastically deformable touch roll and a cooling roll, wherein the cellulose acylate film includes at least one kind of compounds expressed by the following general formula (1) and at least one kind of phosphoric acid compounds selected from among phosphite, phosphonite, phosphinite and phosphane, wherein R¹¹ through R¹⁶ each indicate a hydrogen atom or substituents.

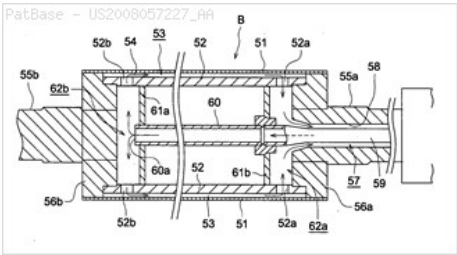
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CPC: Y10T428/10 C08J5/18 C08B3/06 C08B3/16 C08B3/18 C08J2301/10 G02B5/30

European: C08B3/06 C08B3/16 C08B3/18 C08J5/18 M08J301/10 S02B5/30

US: 428/1.1 428/1.100P



Family:

Publication number	Publication date	Application number	Application date
KR20090045921 A	20090508	KR20097003691	20090223
TW200831571 A	20080801	TW20070131884	20070828
US2008057227 AA	20080306	US20070895734	20070827
WO08026514 A1	20080306	WO2007JP66450	20070824

Priority:
JP20060237564 20060901 WO2007JP66450 20070824

Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; MIURA NORIO ; NAKAMURA KAZUAKI ; SUZUKI TAKAYUKI

Inventor(s): (std): MIURA NORIO ; NAKAMURA KAZUAKI ; SUZUKI TAKAYUKI

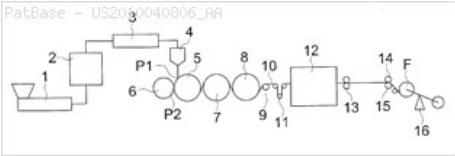
Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: CELLULOSE ESTER OPTICAL FILM, POLARIZING PLATE AND LIQUID CRYSTAL DISPLAY USING THE CELLULOSE ESTER OPTICAL FILM, AND **METHOD** FOR PRODUCING CELLULOSE ESTER OPTICAL FILM

Abstract: Source: US2010040806A Disclosed is a cellulose ester optical film characterized by containing a cellulose ester, a polymer (a) defined below and a compound (b) defined below. (a) a polymer obtained by copolymerizing an ethylenically unsaturated monomer having a partial structure represented by the general formula (1) below in a molecule and at least one ethylenically unsaturated monomer (b) at least one compound selected from the group consisting of carbon radical scavengers, phenol compounds and phosphorus compounds. (In the formula, R1, R2 and R3 independently represent an optionally substituted aliphatic group, an optionally substituted aromatic group or an optionally substituted heterocyclic group; or alternatively any two of R1, R2 and R3 may combine and form a ring structure together with a nitrogen atom or with a nitrogen atom and a carbon atom to which they are bonded to.)

Classifications:
International (IPC 8-9): B28B11/08 B29C47/14 B29C49/08 B29C55/00 B29C55/12 B29D11/00 B29K1/00 C08F220/36 C08F220/58 C08F220/60 C08F226/06 C08F26/06 C08G73/02 C08J5/18 C08K5/04 C08K5/13 C08K5/1535 C08K5/51 C08K5/5393 C08L1/00 C08L1/10 C08L33/26 C08L39/04 C08L39/06 C08L57/12 C09D101/00 C09D201/00 C09D4/00 C09J101/00 C09J4/00 G02B5/30 G02F1/1335 (Advanced/Invention); B29K1/00 (Advanced/Non-invention); B29C47/14 B29C55/12 B29D11/00 C08F26/00 C08J5/18 C08K5/00 C08L1/00 C08L39/00 C08L57/00 G02B5/30 G02F1/13 (Core/Invention)
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US: 106/168.01 106/170.1 106/170.42 264/1.1 264/1.100S 264/1.6 264/1.600S 264/291 428/1.31 428/1.310P 524/37 524/37P 524/37S 525/185 526/260 526/260S



Family:

Publication number	Publication date	Application number	Application date
CN101652684 A	20100217	CN200880010795	20080324
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CN101680989 B	20120328	CN200880017758	20080324
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TWI475058 B	20150301	TW20080111688	20080331
US2010040806 AA	20100218	US20080531289	20080324
US2010069535 AA	20100318	US20080528498	20080324
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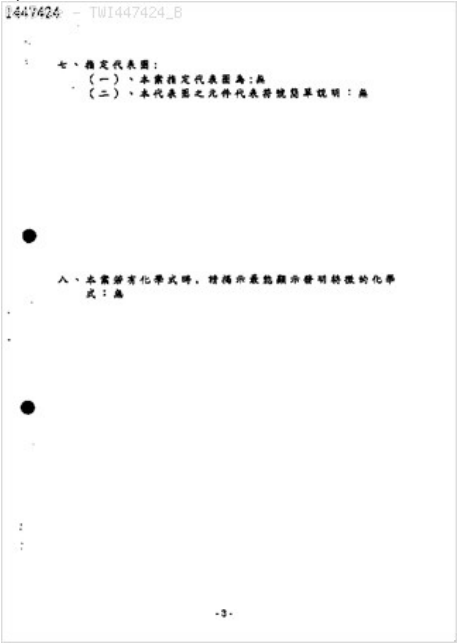
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Probable Assignee: KONICA MINOLTA OPTO INC
Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; KONICA MINOLTA OPTO INC JP ; NAKAHARA ISSEI ; SUZUKI TAKATUGU ; SUZUKI TAKAYUKI
Inventor(s): (std): SUZUKI TAKATUGU ; SUZUKI TAKAYUKI ; ISSEI NAKAHARA ; NAKAHARA ISSEI ; TAKATUGU SUZUKI ; TAKAYUKI SUZUKI
Agent(s): LUCAS AND MERCANTI LLP
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: CLEAR HARD COAT FILM, ANTI-REFLECTION FILM, POLARIZING PLATE AND DISPLAY DEVICE EMPLOYING THE SAME

Abstract: Source: US2010104879A The invention provides a clear hard coat film which exhibits excellent film strength even after the alkali saponification treatment of the hard coat layer conducted in order to improve the tight adhesion property to PVA film constituting a substrate of a polarizing film in laminating the polarizing film with the hard coat film and which is little deteriorated in the film strength even after the durability test under exposure to ozone; and anti-reflection film, a polarizing plate and a display device made by using the clear hard coat film. The invention relates to a clear hard coat film comprising hard coat layer having clear hard coat film on a transparent film substrate wherein the hard coat layer contains a fluorine-siloxane graft polymer and an energy actinic radiation curable resin. It is preferable that the weight ratio of the fluorine-siloxane graft polymer to energy actinic radiation curable resin is 0.05:100 to 5.00:100, and the energy actinic radiation curable resin is preferably a UV ray curable resin. It is preferable to subject the hard coat layer to alkali saponification.

Classifications:
International (IPC 8-9): B32B27/08 B32B27/28 B32B27/30 B32B7/02 C08J7/04 G02B1/10 G02B1/11 G02B5/30 G02F1/1335 (Advanced/Invention); B32B27/08 B32B27/28 B32B27/30 B32B7/02 C08J7/00 G02B1/10 G02B5/30 (Core/Invention)
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European: B32B27/30 G02B1/10B G02B1/11B
US: 428/447



Family:

Publication number	Publication date	Application number	Application date
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CN101687403 B	20150401	CN200880021327	20080516
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JP5321456 B2	20131023	JP20090520402T	20080516
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KR20100027149 A	20100310	KR20097026757	20080516
TW200907401 A	20090216	TW20080123099	20080620
TWI447424 B	20140801	TW20080123099	20080620
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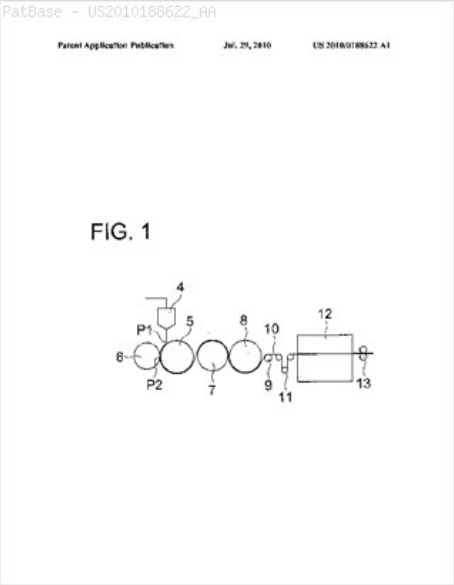
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Probable Assignee: KONICA MINOLTA OPTO INC
Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; OKANO SATOSHI
Inventor(s): (std): OKANO SATOSHI ; SATOSHI OKANO
Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: CELLULOSE ESTER FILM, **METHOD** FOR PRODUCING CELLULOSE ESTER FILM, POLARIZING PLATE USING THE SAME, AND LIQUID CRYSTAL DISPLAY

Abstract: Source: US2010182548A Disclosed is a cellulose ester film which is suppressed in volatilization of components during film formation, while having high **surface** flatness, high durability after saponification and good adhesion to a polarizer. Also disclosed is a **method** for producing such a cellulose ester film by melt forming. Further disclosed are a polarizing plate having high light resistance and high durability, and a liquid crystal display having high image quality. Specifically disclosed is a cellulose ester film characterized by containing a cellulose ester, a compound represented by the general formula (1) below, and a compound represented by the general formula (2) below.

Classifications:
International (IPC 8-9): B29C39/00 B29C47/14 B29D7/01 B29K1/00 B29L11/00 B29L7/00 C08J5/18 C08K5/101 C08K5/107 C08K5/151 C08K5/1535 C08K5/5393 C08L1/10 C08L5/00 G02B1/08 G02B5/20 G02B5/30 G02F1/13 G02F1/1335 (Advanced/Invention); B29K1/00 B29L11/00 B29L7/00 G02B5/30 G02F1/1335 (Advanced/Non-invention); B29C39/00 B29C47/14 B29D7/00 C08J5/18 C08K5/00 C08L1/00 C08L5/00 G02B1/08 G02B5/30 G02F1/13 (Core/Invention); B29C47/14 B29K1/00 B29L11/00 B29L7/00 C08K5/107 C08K5/1535 C08K5/5393 C08L1/10 G02B5/30 G02F1/1335 (Core/Non-invention)
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Family:

Publication number	Publication date	Application number	Application date
CN101679682 A	20100324	CN200880020308	20080703
CN101679682 B	20120613	CN200880020308	20080703
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CN101679683 B	20121024	CN200880020415	20080703
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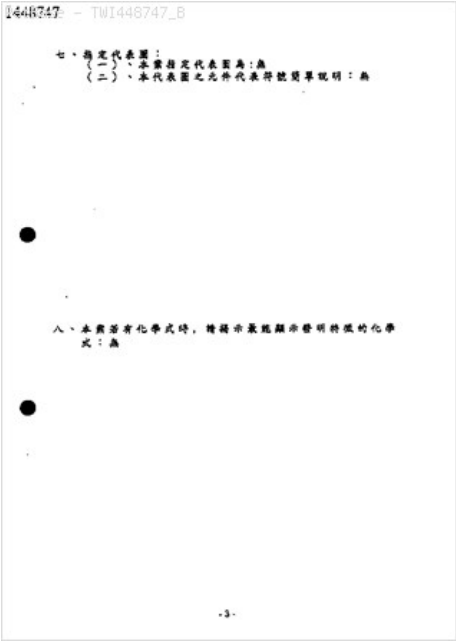
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Probable Assignee: KONICA MINOLTA OPTO INC
Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; SUZUKI TAKATUGU ; SUZUKI TAKAYUKI
Inventor(s): (std): TAKATUGU SUZUKI ; TAKAYUKI SUZUKI ; SUZUKI TAKAYUKI ; SUZUKI TAKATUGU
Agent(s): LUCAS AND MERCANTI LLP
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZW

Title: OPTICAL FILM, POLARIZING PLATE AND LIQUID CRYSTAL DISPLAY APPARATUS

Abstract: Source: US2009068377A Disclosed is an optical film having a hard coat layer on a cellulose ester film, which contains an ester compound composed of a furanose structure or a pyranose structures and a sum of a number of the furanose structures or the pyranose structure is 1 to 12, provided that a part of hydroxy groups of the furanose structure or the pyranose structure has been esterified and a part of hydroxy groups of the furanose structure or the pyranose structure remains.

Classifications:
International (IPC 8-9): B32B23/20 B32B27/06 B32B27/36 B32B5/16 C08B3/00 C08J7/04 C08L1/00 C08L1/10 C09K19/00 G02B1/10 G02B1/11 G02B5/30 G02F1/1335 (Advanced/Invention); B32B23/20 B32B27/36 C07H13/04 C07H13/08 C08B33/02 G02B1/11 G02B5/30 (Advanced/Non-invention); B32B23/00 B32B27/06 B32B27/36 B32B5/16 C08B3/00 C08L1/00 C09K19/00 G02B1/10 G02B5/30 G02F1/13 (Core/Invention); C08L1/00 G02B5/30 (Core/Non-invention)
CPC: G02B1/105 C08J7/047 C08J2301/12 G02B5/30 Y10T428/10 Y10T428/105 Y10T428/25 Y10T428/31591
European: G02B1/10B S02B5/30
US: 349/122 349/96 428/1.1 428/1.100P 428/1.33 428/323 428/323S 428/425.1 428/425.100S 524/35 524/35S 536/58 536/58S



Family:

Publication number	Publication date	Application number	Application date
JP5218411 B1	20130626	JP20090531206T	20080829
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KR101454054 B1	20141027	KR20107004634	20080829
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Priority:
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Probable Assignee: KONICA MINOLTA OPTO INC

Assignee(s): (std): KONICA MINOLTA ADVANCED LAYERS INC ; KONICA MINOLTA OPTO INC ; KUKI RYOTA

Inventor(s): (std): KUKI RYOTA

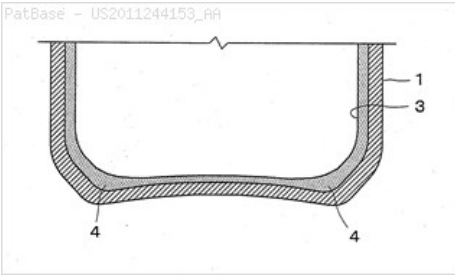
Agent(s): LUCAS AND MERCANTI LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: **METHOD** FOR TREATING INSIDE **SURFACE** OF **GLASS** CONTAINER AND **GLASS** CONTAINER

Abstract: Source: US2011244153A Foaming of polysilazane applied to the inside **surface** of a **glass** container is prevented during sintering, and the amount of alkali elution from the inside **surface** of the **glass** container into a solution in the container is reduced. The inside **surface** of a **glass** container is treated by the steps of applying a polysilazane solution to the inside **surface** of the **glass** container, drying polysilazane while the **glass** container in the state of being inverted and inclined 50 degrees to 70 degrees is rotated, and sintering polysilazane, so that foaming of polysilazane can be prevent during sintering and the amount of alkali elution from the inside **surface** of the **glass** container can be reduced.

Classifications:
International (IPC 8-9): B05D7/22 B32B1/08 B65D23/02 B65D25/14 C03C17/00 C03C17/25 C03C17/28 C03C17/30 C03C17/34 C03C23/00 C09D183/16 (Advanced/Invention); B65D23/02 (Advanced/Non-invention)
CPC: B65D23/02 C03C17/30 C03C17/004 B05D1/002 B05D3/0254 B05D7/227 B05D2203/35 B05D2518/12 C03C17/25 C03C2217/213 C03C2218/11 C03C2218/31 Y10T428/131
European: B65D23/02 C03C17/00B4A C03C17/25 C03C17/30 L05D1/00C L05D203/35 L05D3/02S L05D518/12 L05D7/22C M03C217/213 M03C218/110 M03C218/310
US: 427/230 427/230S 427/231 427/237 427/237S 427/384 428/34.4 428/34.400P



Family:

Publication number	Publication date	Application number	Application date
CN102317168 A	20120111	CN201180000106	20110118
CN102317168 B	20130626	CN201180000106	20110118
JP4808827 B1	20111102	JP20110506526	20110118
KR101262727 B1	20130509	KR20117006142	20110118
KR20110118120 A	20111028	KR20117006142	20110118
TW201200483 A	20120101	TW20110109707	20110322
TWI411588 B	20131011	TW20110109707	20110322
US2011244153 AA	20111006	US20110120485	20110118
US8389052 BB	20130305	US20110120485	20110118
WO11121811 A1	20111006	WO2010JP64189	20100823
WO11122067 A1	20111006	WO2011JP50726	20110118
WO11125241 A1	20111013	WO2010JP64190	20100823

Priority:
JP20100079086 20100330 JP20100088483 20100407 WO2011JP50726 20110118
JP20110506526 20110118

Probable Assignee: TOYO GLASS CO LTD

Assignee(s): (std): GOGUN YASUHIRO ; MIYAMOTO MASANORI ; OHSHIBA KAZUMOTO ; SHIOZAWA KAZUYUKI ; TOYO GLASS CO LTD

Assignee(s): TOYO GLASS CO

Inventor(s): (std): GOGUN YASUHIRO ; KAZUYUKI SHIOZAWA ; MIYAMOTO MASANORI ; OHSHIBA KAZUMOTO ; SHIOZAWA KAZUYUKI ; YASUHIRO GOGUN

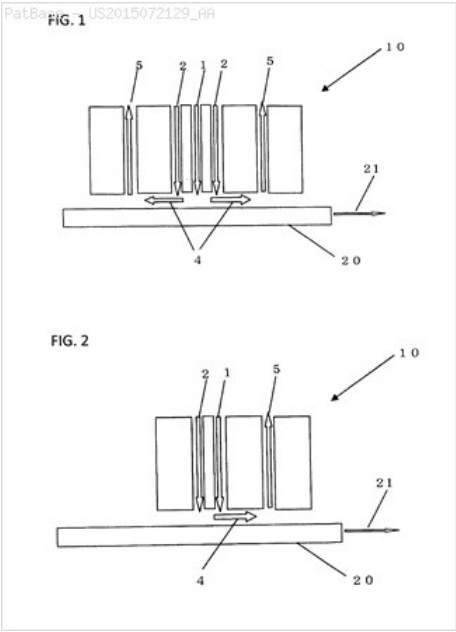
Agent(s): WENDEROTH LIND AND PONACK L L P; WENDEROTH LIND AND PONACK LLP; KAMBE MAKOTO ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: GLASS SHEET CAPABLE OF BEING INHIBITED FROM WARPING THROUGH CHEMICAL STRENGTHENING

Abstract: Source: US2015072129A A glass sheet includes 4 mol percent or more of Al₂O₃. In the glass sheet, a surface Na₂O amount in one surface of the glass sheet is lower than the surface Na₂O amount in the other surface of the glass sheet by 0.2 mass percent to 1.2 mass percent.

Classifications:
International (IPC 8-9): C03B18/02 C03B18/14 C03B18/20 C03B27/03 C03C15/00 C03C17/22 C03C21/00 C03C23/00 C03C3/083 C03C3/112 C03C4/18 G09F9/00 (Advanced/Invention); C03C21/00 (Advanced/Non-invention)
CPC: C03C3/112 C03C4/18 C03C2204/00 C03C21/002 C03C15/00 C03C23/0055 Y10T428/31 Y10T428/315 Y10T428/24355
US: 428/141 428/220 428/409 428/410 501/11



Family:

Publication number	Publication date	Application number	Application date
CN104203858 A	20141210	CN201380016799	20130318
CN104203859 A	20141210	CN201380016910	20130318
CN104203860 A	20141210	CN201380017057	20130318
CN104220393 A	20141217	CN201380017148	20130318
CN104245616 A	20141224	CN201380017036	20130318
JP2013146438 A1	20151210	JP20140507738T	20130318
JP2013146439 A1	20151210	JP20140507739T	20130318
JP2013146440 A1	20151210	JP20140507740T	20130318
JP2013146441 A1	20151210	JP20140507741T	20130318
JP2013146442 A1	20151210	JP20140507742T	20130318
JP2013146442 A1	20151210	JP20140507742T	20130318
JP5790872 B1	20151007	JP20140507742T	20130318
JP5790872 B1	20151007	JP20140507742T	20130318
KR20140138792 A	20141204	KR20147027135	20130318
KR20140138793 A	20141204	KR20147027139	20130318
TW201343582 A	20131101	TW20130110556	20130325
TW201343585 A	20131101	TW20130110547	20130325
TW201343586 A	20131101	TW20130110552	20130325
TW201348154 A	20131201	TW20130110546	20130325
TW201348156 A	20131201	TW20130110548	20130325
US2015072129 AA	20150312	US20140498120	20140926
US2015079347 AA	20150319	US20140498055	20140926
WO13146438 A1	20131003	WO2013JP57724	20130318
WO13146439 A1	20131003	WO2013JP57725	20130318
WO13146440 A1	20131003	WO2013JP57727	20130318
WO13146441 A1	20131003	WO2013JP57728	20130318
WO13146442 A1	20131003	WO2013JP57729	20130318

Priority:

JP20120081072	20120320	JP20120069557	20120326	JP20120078171	20120329
JP20120081072	20120330	JP20120081073	20120330	JP20120276840	20121219
WO2013JP57729	20130318	WO2013JP57724	20130318	WO2013JP57728	20130318
WO2013JP57725	20130318	WO2013JP57727	20130318	JP20140507742	20130318
JP20140507738	20130318	JP20140507739	20130318	JP20140507741	20130318
JP20140507740	20130318				

Probable Assignee: ASAHI GLASS CO LTD

Assignee(s): (std): ASAHI GLASS CO LTD

Assignee(s): ASAHI GLASS CO

Inventor(s): (std): FUKAWA MAKOTO ; HAYASHI YASUO ; IKAWA NOBUAKI ; KATO RYOSUKE ; KOBAYASHI DAISUKE ; MIYASAKA SATOSHI ; MIYASHITA JUNICHI ; NAKADA HIDEKO ; NAKAGAWA KOJI ; NIHEI TOSHIFUMI ; OKAHATA NAOKI ; SERA YOICHI ; SHIRAI MASANOBU ; TANII SHIRO ; WATANABE KUNIO ; YAMANAKA KAZUHIKO

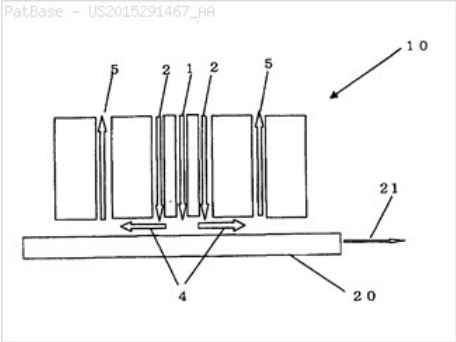
Agent(s): HAMADA YURIKO ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: **METHOD** FOR MANUFACTURING **GLASS** PLATE WITH WHICH WARPING DURING CHEMICAL STRENGTHENING IS REDUCED AND **GLASS** PLATE

Abstract: Source: US2015291467A The present invention relates to a **method** for producing a float **glass** sheet, containing a step of melting a **glass** source material, a step of forming the **glass** melted in the previous step into a **glass** ribbon while allowing it to float on a molten metal, and a step of annealing the **glass** ribbon, in which the float **glass** sheet is a soda lime silicate **glass**, and in the forming step, a top **surface** of the **glass** ribbon that is opposite to a bottom **surface** thereof to be in contact with the molten metal is subjected to a **dealkalization** treatment in the float bath for 1 to 30 seconds and a **surface** temperature of the **glass** ribbon during the **dealkalization** treatment is 600 degrees centigrade or higher.

Classifications:
International (IPC 8-9): C03B18/02 C03B18/18 C03B18/20 C03B25/08 C03C21/00 C03C3/087 G01N23/223 G01N23/225 (Advanced/Invention); C03B25/08 (Advanced/Non-invention)
CPC: C03C21/002 C03B25/08 C03B18/02 C03B18/18 Y02P40/57 C03C21/005 G01N23/223 G01N23/2258 C03B18/20 C03C3/087



Family:

Publication number	Publication date	Application number	Application date
CN104884398 A	20150902	CN201380068393	20131227
CN104884399 A	20150902	CN201380068423	20131227
KR20150102018 A	20150904	KR20157016850	20131227
KR20150103004 A	20150909	KR20157016964	20131227
US2015291467 AA	20151015	US20150751321	20150626
US2016023945 AA	20160128	US20150753416	20150629
WO14104303 A1	20140703	WO2013JP85126	20131227

Priority:
JP20120285511 20121227 JP20130198470 20130925 WO2013JP85126 20131227
WO2013JP85125 20131227

Probable Assignee: ASAHI GLASS CO LTD
Assignee(s): (std): ASAHI GLASS CO LTD
Inventor(s): (std): IKAWA NOBUAKI ; KADOKURA HOKUTO ; MIURA TAKENORI ; SUZUKI YUICHI ; YASUDA KOHEI ; SASAI JUN ; NAKASHIMA TETSUYA
Agent(s): HAMADA YURIKO ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW