

Clarke, Modet & Cº

COLOMBIA

P-2868

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES
E. S. D.

Ref.: Expediente No. 11.039.040
Solicitud de Patente a nombre de
BRASKEM AMERICA, INC.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 11-039040- -00001-0000

Fecha: 2011-05-12 14:46:39 Dep. 2020 DIR.NUEVASCR
Tra. 11 PATENTEIYII Eve: 378 FASENACIONALI
Act. 329 CTOINFORMACION Folios: 14

Yo, DILIA MARÍA RODRÍGUEZ D'ALEMAN, identificada como aparece al pie de mi firma, domiciliada en la Carrera 11 No. 86-53, piso 6, obrando como apoderada de la sociedad **BRASKEM AMERICA, INC.** domiciliada en Pennsylvania, Estados Unidos de América, solicitante de la patente de la referencia, atentamente me permito presentar:

1. Copia auténtica del poder junto con el Certificado de Existencia y Representación Legal de dicha sociedad, con la respectiva traducción al español de lo pertinente.
2. Copia simple del Informe Preliminar Internacional sobre Patentabilidad (IPRP) expedido en fase internacional del PCT.

Señor Superintendente,

DILIA MARÍA RODRÍGUEZ D'ALEMAN
C.C. 41.654.882 de Bogotá.
T.P. 20824 CSJ

APOSTILLE

(Convention de La Haye du 5 octobre 1961)

1. Country : United States of America
2. This public document has been signed by **ELIZABETH A. WATERS**
3. acting in the capacity of NOTARY PUBLIC
4. bears the seal/stamp ELIZABETH A. WATERS , NOTARY PUBLIC, PHILADELPHIA COUNTY, COMMONWEALTH OF PENNSYLVANIA

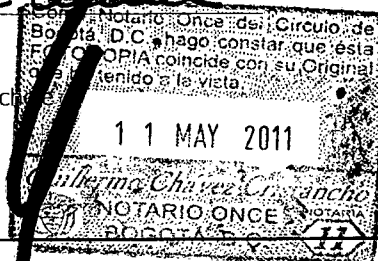
Certified

5. at Harrisburg, Pennsylvania
6. The 21st day of April, 2011
7. by Carol Aichele, Acting Secretary of the Commonwealth of Pennsylvania
8. No: 201113480
9. Seal/Stamp
10. Signature



Carol Aichele

Carol Aichele



This Apostille only certifies the authenticity of the signature and the capacity of the person who has signed the public document, and, where appropriate, the identity of the seal or stamp which the public document bears.

This Apostille does not certify the content of the document for which it was issued.

This Apostille is not valid for use anywhere within the United States of America, its territories or possessions.

COLOMBIA

Carrera 11 N° 86-53 Piso 6 Bogotá Colombia Tel: (57 1) 6181088 Fax: (57 1) 6350824 Email: info@clarkemodet.com.co

PODER

Yo (nosotros), abajo firmante(s)
Mark G. Nikolich - Vice President of Commercial and Supply
and

En mi (nuestro) carácter de representante(s) legales de
BRASKEM AMERICA, INC.

una sociedad organizada y existente de acuerdo con las leyes de
The State of Delaware, United States of America

y en actual cumplimiento de su objeto social, con domicilio en
1735 Market Street Philadelphia, Pennsylvania 19103,
Estados Unidos de América.

por el presente instrumento confiero (conferimos) poder especial
a favor de DILIA MARIA RODRIGUEZ D'ALEMAN, con
Cédula de Ciudadanía No. 41.654.882 de Bogotá, y tp. 147, con
domicilio en Bogotá, Colombia, para que actuando en su orden
en nombre del (de la) otorgante le (la) representen ante cualquier
entidad, autoridad y/o persona, especialmente ante las del orden
Administrativo, Administrativo-Contentious, Judicial, arbitrales
de Arbitramento y/o cualquier otro en lo referente a los siguientes
asuntos:

- 1) Solicitar, tramitar, obtener y/o registrar cualquiera de las
modalidades de Propiedad Industrial, tales como: patentes de
invención, modelos de utilidad; diseños industriales, variedades
vegetales; marcas, lemas, nombres y enseñanzas comerciales y
denominaciones de origen; así como sus renovaciones, prórro-
gas, transferencias, cambios de nombre y/o domicilio, contratos y
licencias.
- 2) Solicitar, tramitar, obtener y/o registrar derechos de autor, en
cualquiera de sus presentaciones así como la protección de
secretos industriales y know-how.
- 3) Solicitar, tramitar, obtener y/o registrar registros sanitarios,
permisos y/o licencias de funcionamiento; así como sus renova-
ciones o prórrogas, transferencias, cambios de nombre y/o
domicilio, contratos y licencias.
- 4) Ejercer acciones de oposición, observación, reclamos, reconsi-
deración, reposición, apelación, cancelación administrativa o
judicial, nulidad, protección al consumidor, concesión de licen-
cias, protección de secretos industriales y demás acciones y
recursos relacionados con derechos derivados de los asuntos
arriba indicados y en contra de la competencia desleal, acciones
derivadas de la obtención o explotación de licencias, acciones de
indemnización de perjuicios. También podrá(n) intervenir en
juicios civiles, comerciales, penales, contencioso-administrativos,
tutelas y de policía; en acciones o juicios promovidos por el (la)
mandante o en contra el (ella).
- 5) Registrar nombres de dominio ante la entidad competente.
- 6) En el ejercicio de este mandato los mandatarios arriba men-
cionados quedan facultados para: conciliar, cancelar, transigir,
comprometer en árbitros, desistir, recibir y tomar posesión de la
cosa objeto de litigio y renunciar o desistir a derechos concedi-
dos o en curso de concesión, admitir los hechos del proceso.
- 7) Ratificar o no la agencia oficiosa.
- 8) Así mismo faculto (facultamos) a los mencionados apoderados
para recibir notificaciones y designar apoderados judiciales o
extrajudiciales, sustituir el presente poder y revocar las susti-
tuciones que hicieren.

Dado y firmado en

a los días de

Firma / signature

POWER OF ATTORNEY

I (we), the undersigned Mark G. Nikolich - Vice President of
Commercial and Supply and

Legal representative(s) of BRASKEM AMERICA, INC.

an organization existing under the laws of
The State of Delaware, United States of America

and in present execution of its business activity, domiciled 1735
Market Street Philadelphia, Pennsylvania 19103, United States of
America

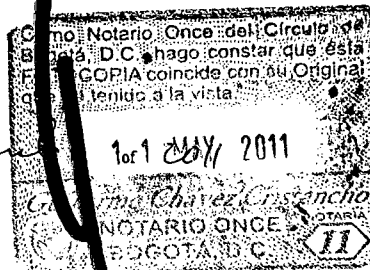
do hereby grant POWER OF ATTORNEY to DILIA MARIA
RODRIGUEZ D'ALEMAN, identification card No. 41.654.882 of
Bogotá, and tp. 20824 residing in Bogotá, Colombia, to act in the
order of their appointment in behalf of grantor before any entity,
authority and/or natural or juridical person, specially before those
Administrative, Administrative-Contentious, Judicial, arbitration
courts, and/or any other, in all matters concerning the following:

- 1) To apply, process, obtain and/or register any of the modalities of
Industrial Property, such as: Patents of Invention, Utility Models;
Designs, plant varieties; Marks, Slogans, Trade Names and emblems
and appellations of Origin; as well as their renewals, assignments,
changes of name and/or domicile, agreements and licenses.
- 2) To apply, process, obtain and/or register copyrights of any kind as
well as protection of industrial secrets or know-how.
- 3) To apply, process, obtain and/or register sanitary registrations,
operating authorizations and/or licenses; as well as their renewals or
assignments, changes of name and/or domicile, agreements and
licenses.
- 4) To bring actions of opposition, observations, claims,
reconsideration, appeal or legal remedies, cancellations, nullity,
protection to the consumer, granting of licenses, protection of trade
secrets and other actions related with rights derived from the above-
mentioned matters and against the unfair competition, actions
resulting from the obtaining or exploitation of licenses, recovering
damages actions. They can also intervene or participate in Civil,
Commercial, Criminal or Contentious-Administrative Trials; the
actions for writ mandamus, police actions; in actions, lawsuits or
litigations instituted by the grantor or against him.
- 5) To register domain names before the competent entity.
- 6) To the effect of this mandate the above-named proxy are
empowered to: conciliate, cancel, settle, submit to arbitration,
withdraw and to receive and take possession of the litigation related
object and waive or renounce the rights granted or in process of
granting, admit the facts of the case.
- 7) To ratify or not the officious agency.
- 8) I (we) hereby appoint the afore mentioned attorneys with powers to
receive notifications and to designate judicial and extrajudicial
attorneys, substitute this Power of Attorney and to revoke such
substitutions.

Granted and signed at

on this 13th day of April

10th April 2011



Mark G. Nikolich
Vice President - Commercial and Supply

CERTIFICADO NOTARIAL
(Cuando el solicitante es SOCIEDAD)
(Poderes otorgados en: El Salvador, Estados Unidos, México y Venezuela)

A los 13 días del mes de Abril
de 2011, el Notario que suscribe DA FE de que:
1. Mark G Nikolich
(nombre de la persona que firma el poder)
mayor de edad y domiciliado Wilmington, DE.
U.S.A. firmó de su puño
y letra el documento que antecede.
2. Conoce al (a la) otorgante y que este (a) está legalmente
capacitado para el otorgamiento.
3. El otorgante ha firmado el referido documento en su
carácter de Vice-Presidente Commercial
De la persona jurídica BRASKEM AMERICA, INC.

4. La citada persona jurídica con sede en 1735 Market Street
Philadelphia, Pennsylvania 19103, Estados Unidos de América,
está legalmente constituida, que tiene actualmente
existencia legal y que el acto para el cual se ha otorgado este
poder está comprendido entre los que constituyen su objeto
social.
5. El otorgante tiene efectivamente la representación que ostenta,
que esta es legítima y que está facultado para otorgar este
poder.
6. Las anteriores certificaciones de los puntos 3, 4 y 5, me constan
porque he tenido a la vista los documentos auténticos.

Notario Público

NOTA: A continuación de lo anterior, el Cónsul de Colombia
debe autenticar la firma del Notario Público.

CERTIFICADO NOTARIAL (Cuando el solicitante es INDIVIDUO)

A los _____ días del mes de _____
de _____, el Notario que suscribe DA FE de que:

1. _____
(nombre de la persona que firma el poder)

mayor de edad y domiciliado en _____
firmó en su presencia
el documento que antecede, conoce al otorgante y que este
está legalmente capacitado para el otorgamiento.

Notario Público

NOTA: A continuación de lo anterior, el Cónsul de Colombia
debe autenticar la firma del Notario Público.

Para todos los demás países el Señor Cónsul de Colombia o
ante quien se otorgue, debe expedir una certificación dejando
constancia 1) de la existencia legal de la sociedad, 2) de que
esta ejerce actualmente su objeto social, y 3) de que la persona
o personas que otorgan el poder están facultadas para hacerlo,
dejando
constancia así mismo de que tuvo a la vista las pruebas que
acrediten tales circunstancias.

LEGALIZACIÓN POR EL CONSUL DE COLOMBIA
O POR APOSTILLA

NOTARIAL CERTIFICATE

(When the applicant is a CORPORATION)
(Powers of attorney granted in: El Salvador, Mexico, U.S.A. and Venezuela)

This 13th day of April, 2011
the undersigned Notary CERTIFIES that:

1. Mark G Nikolich
(name of the person who signs the power of attorney)

of legal age and domiciled
in Wilmington, DE, USA set his
hand on the foregoing document.

2. The grantor is to him personally known and that he/she has legal
capacity to execute the document.

3. The grantor has executed the foregoing document in his capacity
of Vice-President - Commercial and Supply
Of the juridical BRASKEM AMERICA, INC.

4. The mentioned juridical person with place of 1735 Market Street
Philadelphia, Pennsylvania 19103, United States of America, is
duly organized, has actual legal existence and that the purposes for
which the power of attorney is granted are within the scope of its
corporate purposes.

5. The grantor has in fact the referred quality and that his/her
representation is legal and that he/she is empowered to grant this
power of attorney.

6. I have based the above certifications 3, 4 and 5, on the authentic
documents which for such purpose were exhibited to me.

Elizabeth A Waters 4/13/2011
Notary Public

NOTA: Then the Colombian Consul must legalize the signature of the
Notary Public.

NOTARIAL CERTIFICATE (When the applicant is an INDIVIDUALS)

On this _____ day of _____
the undersigned Notary CERTIFIES that:

1. _____
(name of the person who signs the Power of Attorney)

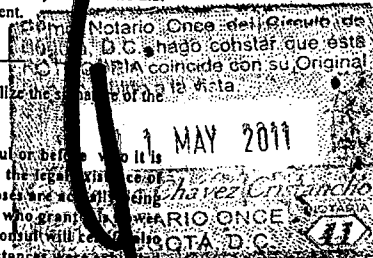
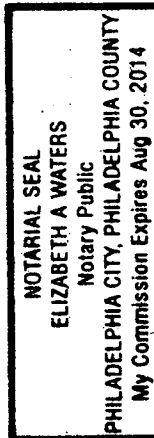
of legal age and domiciled at _____
signed in his presence the
foregoing document, the grantor is to him personally known and that
he/she has legal capacity to execute the document.

Notary Public

NOTA: Then the Colombian Consul must legalize the signature of the
Notary Public.

For all other countries the Colombian Consul or before who it is
granted must issue a certification stating 1) the legal existence of
the corporation, 2) that the corporate purposes are actually being
accomplished, 3) that the person or persons who grant the power of
attorney are empowered to do it. The Consul will take into account
that the documents evidencing those circumstances were exhibited
to him.

LEGALIZATION BY THE COLOMBIAN CONSUL OR BY
APOSTILLE.



Traducción oficial hecha por Jimena Escobar Uribe, traductora e intérprete oficial según resolución No. 0369 de 1995, expedida por el Ministerio de Justicia de documento de poder y certificación notarial de la sociedad **BRASKEM AMERICA, INC.**, domiciliada en Filadelfia, Pensilvania, Estados Unidos de América, que lleva la Apostilla No. **201113480** de 21 de abril de 2011 de **ESTADOS UNIDOS DE AMÉRICA**.

Jimena Escobar Uribe
JIMENA ESCOBAR URIBE
 Traductor e Intérprete Oficial
 Resolución No. 0369 Min. Justicia 1995

Poder

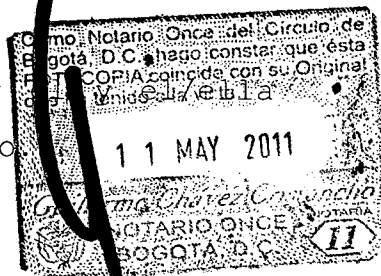
Yo, el suscrito, Mark G. Nikolich, Vicepresidente Comercial y de Suministro, representante legal de BRASKEM AMERICAM INC., una sociedad existente bajo las leyes de Estado de Delaware, Estados Unidos de América y que actualmente ejerce su actividad corporativa, domiciliada en 1735 Market Street, Filadelfia, Pensilvania 19103, Estados Unidos de América
(Nota del traductor: El resto del documento se encuentra con idéntico texto en la parte izquierda del documento en idioma español, razón por la cual no se hace su traducción).

Documento de poder firmado el 13 de abril de 2011 por firma ilegible.

Certificado notarial:

Este día 13 de abril de 2011, el suscrito notario CERTIFICA que:

1. Mark G. Nikolich, mayor de edad y domiciliado en Wilmington, Delaware, Estados Unidos de América firmó el documento anterior.
2. El otorgante es conocido personalmente por [illegible] tiene capacidad legal para ejecutar el documento [illegible]



3. El otorgante ha ejecutado el documento anterior en su capacidad de vicepresidente comercial de la persona jurídica BRASKEM AMERICA, INC.

(Nota del traductor: El resto del documento se encuentra con idéntico texto en la parte izquierda del documento en idioma español, razón por la cual no se hace su traducción).

Documento legalizado mediante firma y sello por notario público.

06.7.69
Firma
NO SE ASUME RESPONSABILIDAD DEL TRAYTO
CIVIL Y PENAL POR LAS FUNCIONES INDICADAS
CIVIL Y PENAL POR LAS FUNCIONES INDICADAS
Firma
Elizabeth A. Waters, notario público, Ciudad Filadelfia, Condado de Filadelfia, mi comisión termina el 31 de agosto de 2014.

APOSTILLA

(Convención de la Hay de 5 de octubre de 1961)

MINISTERIO DE RELACIONES EXTERIORES
BOGOTÁ D.C.
56
País: Estados Unidos de América
Este documento público ha sido firmado por ELIZABETH A. WATERS, Notario Público en su capacidad de NOTARIO PÚBLICO en la ciudad de Filadelfia, Condado de Filadelfia, Commonwealth de Pensilvania. Se anexa el sello/estampilla de ELIZABETH A. WATERS, NOTARIO PÚBLICO, CONDADO DE FILADELFIA, COMMOWEALTH DE PENSILVANIA

CERTIFICADO

5. en Harrisburg, Pensilvania
6. el día 21 de abril de 2011
7. por Carol Aichele, Secretario Encargado del Consulado de Pensilvania
8. No. 201113480



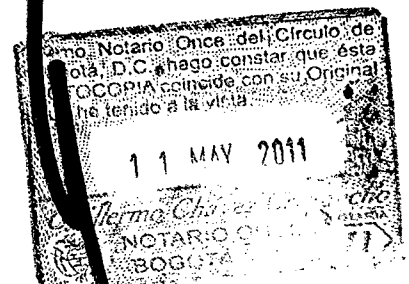
9. Sello/estampilla: Sello oficial
10. Firma: firmado por Carol Aichele

Esta Apostilla únicamente certifica la autenticidad de la firma y el la capacidad de la persona que ha firmado el documento público y, cuando sea apropiado, la identidad del sello o estampilla que lleva el documento público.

Esta Apostilla no certifica el contenido del documento para el cual fue expedida.

Esta Apostilla no es válida para uso en ningún lugar dentro de los Estados Unidos, sus territorios o posesiones.

JIMENA ESCOBAR URIBE
Traductor e Intérprete Oficial
Resolución No. 0369 Min. Justicia 1995



ADVANCE E-MAIL

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)

(PCT Rule 44bis.1(c))

To:

PAIKOFF, Richard A.
Duane Morris LLP
30 South 17th Street
Philadelphia, PA 19103-4196
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)

14 April 2011 (14.04.2011)

Applicant's or agent's file reference

~~ES-27-00240~~

F 5221-

IMPORTANT NOTICE

International application No.

PCT/US2009/058798

International filing date (day/month/year)

29 September 2009 (29.09.2009)

Priority date (day/month/year)

01 October 2008 (01.10.2008)

Applicant

SUNOCO CHEMICALS, INC. et al

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Dorothee Mülhausen

Facsimile No. +41 22 338 82 70

e-mail: pt01.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference E9427-00240	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2009/058798	International filing date (<i>day/month/year</i>) 29 September 2009 (29.09.2009)	Priority date (<i>day/month/year</i>) 01 October 2008 (01.10.2008)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant SUNOCO CHEMICALS, INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the report |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 05 April 2011 (05.04.2011)
Facsimile No. +41 22 338 82 70	Authorized officer Dorothee Mülhausen e-mail: pt01.pct@wipo.int

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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
RICHARD A. PAIKOFF
DUANE MORRIS LLP
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103-4196

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

30 NOV 2009

Applicant's or agent's file reference
E9427-00240

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US 09/58798

International filing date (day/month/year)

29 September 2009 (29.09.2009)

Priority date (day/month/year)

01 October 2008 (01.10.2008)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - C08L 23/00, 23/04 (2009.01)

USPC - 525/240

Applicant SUNOCO CHEMICALS, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Date of completion of this opinion

19 Nov 2009 (19.11.2009)

Authorized officer:

Leo W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 09/58798

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed
☐ filed together with the international application in electronic form
☐ furnished subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

5A

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 09/58798

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-18	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-8, and 11-18 lack an inventive step under PCT Article 33(3) as being obvious over US 2007/0167576 A1 to Kim et al. (hereinafter 'Kim') in view of US 5,460,884 A to Kobylivker et al. (hereinafter 'Kobylivker').

Regarding claim 1, Kim discloses a resin composition comprising:

a. about 70% to about 95% by weight of a polypropylene homopolymer, said polypropylene homopolymer having less than 3% by weight xylene solubles and a crystallinity of at least 55% (para [0009], [0011]-[0012], [0037]); and
b. about 5% to about 30% by weight of an ethylene/propylene random copolymer (para [0009], [0011]-[0012]). Kim does not specifically disclose wherein said ethylene/propylene random copolymer contains greater than about 7.2% to about 15% ethylene by weight. However, Kobylivker discloses similar polypropylene polymer films, which have 50 to 95% by weight polypropylene and 5 to 50% by weight ethylene/propylene random copolymer, that can have an ethylene content of about 12% (Claim 1). It would have been obvious to a person of ordinary skill in the art to incorporate the ethylene/propylene random copolymer as disclosed by Kobylivker into the resin composition as disclosed by Kim because it would have provided a blended polypropylene ethylene/propylene copolymer with enhanced physical properties such as a higher film tensile modulus.

Regarding claim 2, Kim further discloses the polymer according to claim 1, wherein the polymer further comprises at least one additive selected from the group consisting of nucleators, antioxidants, acid neutralizers, slip agents, antiblock agents, antifogging agents, pigments, and combinations thereof (para [0043]).

Regarding claim 3, Kim discloses a resin composition comprising:

a. about 70% to about 85% of a polypropylene homopolymer having less than 3% by weight xylene solubles and a crystallinity of at least 55% (para [0009], [0011], [0012], [0037]); and
b. about 15% to about 30% by weight of an ethylene/propylene random copolymer (para [0009], [0011], [0012]). Kim does not specifically disclose wherein said ethylene/propylene random copolymer contains greater than about 7.2% to about 15% ethylene by weight. However, Kobylivker discloses similar polypropylene polymer films, which have 50 to 95% by weight polypropylene and 5 to 50% by weight ethylene/propylene random copolymer, that can have an ethylene content of about 12% (Claim 1). It would have been obvious to a person of ordinary skill in the art to incorporate the ethylene/propylene random copolymer as disclosed by Kobylivker into the resin composition as disclosed by Kim because it would have provided a blended polypropylene ethylene/propylene copolymer with enhanced physical properties such as a higher film tensile modulus.

Regarding claim 4, Kim further discloses the polymer according to claim 3, wherein the polymer further comprises at least one additive selected from the group consisting of nucleators, antioxidants, acid neutralizers, slip agents, antiblock agents, antifogging agents, pigments, and combinations thereof (para [0043]).

Regarding claim 5, Kim discloses a method for preparing an in-reactor blended polymer comprising about 70% to about 95% of a polypropylene homopolymer and about 5% to about 30% by weight of an ethylene/propylene random copolymer (para [0009], [0011], [0012]), said method comprising:

a. polymerizing propylene with a Ziegler-Natta catalyst system in at least one liquid phase loop reactor to produce said homopolymer (para [0030], [0041], [0068]) - slurry reactor or loop reactor is a liquid phase loop reactor; and
b. copolymerizing propylene and ethylene in at least one gas phase reactor in the presence of said homopolymer (para [0030], [0041], [0068]). Kim does not specifically disclose wherein said ethylene/propylene random copolymer contains greater than about 7.2% to about 15% ethylene by weight. However, Kobylivker discloses similar polypropylene polymer films, which have 50 to 95% by weight polypropylene and 5 to 50% by weight ethylene/propylene random copolymer, that can have an ethylene content of about 12% (Claim 1). It would have been obvious to a person of ordinary skill in the art to incorporate the ethylene/propylene random copolymer as disclosed by Kobylivker into the resin composition as disclosed by Kim because it would have provided a blended polypropylene ethylene/propylene copolymer with enhanced physical properties such as a higher film tensile modulus.

-----continued in Supplemental Box-----

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box No. V 2. citations and explanations:

Regarding claim 6, Kim discloses a method for preparing a melt blended polymer comprising about 70% to about 95% of a polypropylene homopolymer and about 5% to about 30% by weight of an ethylene/propylene random copolymer para [0009], [0011], [0012]), said method comprising:

a. polymerizing propylene with a Ziegler-Natta catalyst system in at least one liquid phase loop reactor to produce said homopolymer (para [0030], [0041], [0068] - slurry reactor or loop reactor is a liquid phase loop reactor); and
b. copolymerizing propylene and ethylene with a Ziegler-Natta catalyst system in at least one gas phase reactor to produce said ethylene propylene copolymer (para [0030], [0041], [0068]); and
c. melt blending said homopolymer and said copolymer (para [0030], [0041]). Kim does not specifically disclose wherein said ethylene/propylene random copolymer contains greater than about 7.2% to about 15% ethylene by weight. However, Kobylivker discloses similar polypropylene polymer films, which have 50 to 95% by weight polypropylene and 5 to 50% by weight ethylene/propylene random copolymer, that can have an ethylene content of about 12% (Claim 1). It would have been obvious to a person of ordinary skill in the art to incorporate the ethylene/propylene random copolymer as disclosed by Kobylivker into the resin composition as disclosed by Kim because it would have provided a blended polypropylene ethylene/propylene copolymer with enhanced physical properties such as a higher film tensile modulus.

Regarding claim 7, Kim further discloses the method of claim 5, further comprising compounding said in-reactor blended polymer with one or more additives (para [0043]).

Regarding claim 8, Kim further discloses the method of claim 6, further comprising melt blending one or more additives with said homopolymer and copolymer (para [0043]).

Regarding claim 11, Kim discloses a biaxially oriented polypropylene film comprising a polymer, said polymer comprising:

a. about 70% to about 95% by weight of a polypropylene homopolymer, said polypropylene homopolymer having less than 3% by weight xylene solubles, and a crystallinity of at least 55% (para [0009], [0011], [0012], [0037]); and
b. about 5% to about 30% by weight of an ethylene/propylene random copolymer (para [0009], [0011], [0012]). Kim does not specifically disclose wherein said ethylene/propylene random copolymer contains greater than about 7.2% to about 15% ethylene by weight. However, Kobylivker discloses similar polypropylene polymer films, which have 50 to 95% by weight polypropylene and 5 to 50% by weight ethylene/propylene random copolymer, that can have an ethylene content of about 12% (Claim 1). It would have been obvious to a person of ordinary skill in the art to incorporate the ethylene/propylene random copolymer as disclosed by Kobylivker into the resin composition as disclosed by Kim because it would have provided a blended polypropylene ethylene/propylene copolymer with enhanced physical properties such as a higher film tensile modulus.

Regarding claim 12, Kim further discloses the biaxially oriented film of claim 11, wherein the ideal processing temperature is about 328 degrees F (para [0068] - Table 11 - melt blend temperature is about 166 degrees C, which is 330 degrees F).

Regarding claim 13, Kim further discloses the biaxially oriented film of claim 11, wherein the haze is about 0.57 (para [0067] - Table 10 - Sample C - haze is about 0.58)

Regarding claim 14, Kim further discloses the biaxially oriented film of claim 11, wherein the percent transmittance is greater than about 90% (para [0067] - Table 10).

Regarding claim 15, Kim further discloses the biaxially oriented film of claim 11, wherein the clarity is greater than about 95% (para [0067] - Table 10).

Regarding claim 16, Kim further discloses the biaxially oriented film of claim 11, wherein said polymer further comprises at least one additive selected from the group consisting of nucleators, antioxidants, acid neutralizers, slip agents, antiblock agents, antifogging agents, pigments, and combinations thereof (para [0043]).

Regarding claim 17, Kim further discloses the biaxially oriented film of claim 11, wherein said film is opaque (para [0070], Claim 7).

Regarding claim 18, Kim further discloses the biaxially oriented film of claim 11, wherein said film is transparent (para [0070], Claim 10).

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:
Prior Supplemental Box:

Claims 9-10 lack an inventive step under PCT Article 33(3) as being obvious over Kim in view Kobylivker and further in view of US 2003/0060580 A1 to Shamshoum et al. (hereinafter 'Shamshoum').

Regarding claim 9, Kim further discloses the method of claim 5, wherein said Ziegler-Natta catalyst comprises at least one external donor (para [0042], [0068]). Kim does not specifically disclose wherein the Ziegler-Natta catalyst comprises titanium. However, Kim discloses that the Ziegler-Natta catalyst does include the addition of a co-catalyst comprising a metal alkyl which could be titanium (para [0042], [0068]). Furthermore, Shamshoum discloses that conventional Ziegler-Natta polymerization catalyst used in similar produced crystalline polypropylene polymer and ethylene/propylene copolymers are generally comprised from metal alkyl that is typically a transition metal such as titanium (para [00006], [0025], [0040]). It would have been obvious to a person of ordinary skill in the art that a similar Ziegler-Natta catalyst comprising titanium as disclosed by Shamshoum could have been used in the method of claim 5 because it would have helped improved the stereo-regulation of the polymer so that a more crystalline polymer with higher isotacticity is produced.

Regarding claim 10, Kim further discloses the method of claim 6, wherein said Ziegler-Natta catalyst comprises at least one external donor (para [0042], [0068]). Kim does not specifically disclose wherein the Ziegler-Natta catalyst comprises titanium. However, Kim discloses that the Ziegler-Natta catalyst does include the addition of a co-catalyst comprising a metal alkyl which could be titanium (para [0042], [0068]). Furthermore, Shamshoum discloses that conventional Ziegler-Natta polymerization catalyst used in similar produced crystalline polypropylene polymer and ethylene/propylene copolymers are generally comprised from metal alkyl that is typically a transition metal such as titanium (para [00006], [0025], [0040]). It would have been obvious to a person of ordinary skill in the art that a similar Ziegler-Natta catalyst comprising titanium as disclosed by Shamshoum could have been used in the method of claim 6 because it would have helped improved the stereo-regulation of the polymer so that a more crystalline polymer with higher isotacticity is produced.

Claims 1-18 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.



Bogotá D.C.,
2020

Doctor(a)
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Apoderado(a) y/o Representante de
BRASKEM AMERICA, INC.

REFERENCIA	Radicación No.	11 039040
	Solicitud internacional	PCT/US2009/58798
	Fecha inicio fase nacional	01/05/2011
	Trámite	11
	Evento	378
	Actuación	430
	Oficio No.	008879

Como resultado del examen de forma, realizado con fundamento en el artículo 38 de la Decisión 486 de la Comisión de la Comunidad Andina, artículo 27 del Tratado de Cooperación en Materia de Patentes (PCT), regla 51 bis del Reglamento y Circular Única de la Superintendencia de Industria y Comercio, se le comunica que:

1. La solicitud no contiene la copia del documento en que consta la cesión del derecho a la patente del inventor al solicitante o a su causante, conforme a lo establecido por el artículo 26 literal k) de la Decisión 486 de la Comisión de la Comunidad Andina. Cuando se trate de documentos otorgados en el extranjero, estos deberán legalizarse de conformidad con lo dispuesto por los artículos 259 y 260 del Código de Procedimiento Civil. Cuando se trate de las declaraciones a que hace referencia la Regla 4.17 ii) del Tratado de Cooperación en Materia de Patentes PCT., el alcance de las tales declaraciones se determinará según indiquen claramente una cesión de derechos del inventor al solicitante o su causante, de conformidad con lo dispuesto en el numeral 5.2.15 del Capítulo Quinto, Título X de la Circular Única de Superintendencia de Industria y Comercio.

En cumplimiento de lo dispuesto por el artículo 39 de la Decisión 486, se le requiere para que dentro del término de dos meses siguientes a la fecha de notificación del presente oficio, complete los requisitos anteriormente enunciados. En caso de no dar cumplimiento al presente requerimiento, la solicitud se considerará abandonada y perderá su prelación.

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.

JOSE LUIS SALAZAR LOPEZ
Director de Nuevas Creaciones (c)

03 JUN. 2011

El anterior requerimiento fue notificado por fijación en lista de fecha _____.
adpa11