PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4804946

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GEORGIA-PACIFIC CHEMICALS LLC	11/01/2017

RECEIVING PARTY DATA

Name:	ECOLAB USA INC.
Street Address:	1 ECOLAB PLACE
City:	ST. PAUL
State/Country:	MINNESOTA
Postal Code:	55102

PROPERTY NUMBERS Total: 71

Property Type	Number
Application Number:	09129304
Application Number:	08910638
Application Number:	09018196
Application Number:	10097656
Patent Number:	6222006
Patent Number:	7034087
Patent Number:	7119148
Patent Number:	7488403
Patent Number:	7589153
Patent Number:	7863395
Patent Number:	7868071
Patent Number:	7897013
Patent Number:	8246781
Patent Number:	8557925
Patent Number:	8785593
Patent Number:	9045862
Patent Number:	9180644
Patent Number:	9243365
Patent Number:	9499944
Patent Number:	9506196

PATENT REEL: 045221 FRAME: 0768

504758218

Property Type	Number
Patent Number:	9611590
Patent Number:	9689114
Patent Number:	9695552
Patent Number:	9777436
Patent Number:	9834890
Application Number:	10785403
Application Number:	10919487
Application Number:	10919488
Application Number:	11136730
Application Number:	11613758
Application Number:	60892382
Application Number:	11830426
Application Number:	12038250
Application Number:	12275619
Application Number:	61346802
Application Number:	13037681
Application Number:	61477679
Application Number:	13448982
Application Number:	61673534
Application Number:	61713346
Application Number:	61739329
Application Number:	61748781
Application Number:	61846855
Application Number:	13944923
Application Number:	14049337
Application Number:	61901094
Application Number:	14108492
Application Number:	14135440
Application Number:	61918906
Application Number:	61970985
Application Number:	14326515
Application Number:	62034375
Application Number:	62064508
Application Number:	14535320
Application Number:	14576789
Application Number:	14668097
Application Number:	14679417
Application Number:	14679442

Property Type	Number
Application Number:	14725403
Application Number:	14725384
Application Number:	62184452
Application Number:	14820580
Application Number:	62241453
Application Number:	14884723
Application Number:	15162016
Application Number:	15738893
Application Number:	15478203
Application Number:	15633133
Application Number:	15634615
Application Number:	15722944
Application Number:	15831161

CORRESPONDENCE DATA

Fax Number: (651)204-7507

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 6517956814

Email: USPatent@ecolab.com
Correspondent Name: ECOLAB USA INC.
Address Line 1: 1 ECOLAB PLACE

Address Line 4: ST. PAUL, MINNESOTA 55102

ATTORNEY DOCKET NUMBER:	GP_TO_ECOLAB_USASSIGNMENT
NAME OF SUBMITTER:	AMY J. HOFFMAN
SIGNATURE:	/Amy J. Hoffman/
DATE SIGNED:	02/01/2018

Total Attachments: 28

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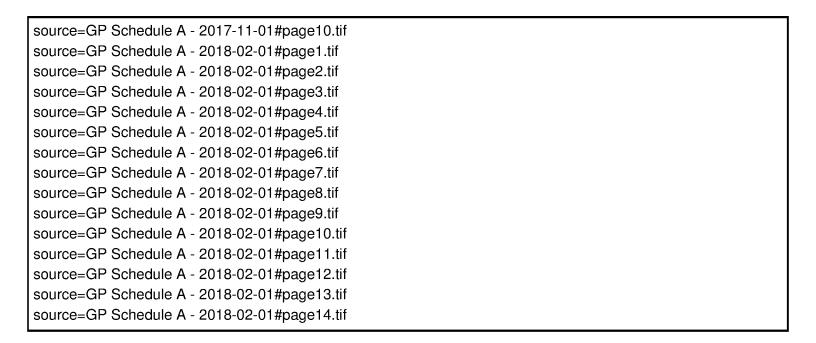
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WORLDWIDE PATENT ASSIGNMENT

This Worldwide Patent Assignment ("Assignment") is made and entered into as of November 1, 2017, by and between Georgia-Pacific Chemicals LLC, a Delaware limited liability company ("Assignor"), and Ecolab USA, Inc., a Delaware corporation ("Assignee") and an affiliate of Nalco Company LLC, a Delaware limited liability company ("Nalco"), pursuant to that certain Purchase and Sale Agreement, dated as of September 28, 2017, by and between Assignor, Nalco and, solely for purposes of Section 51 therein, Ecolab Inc. (the "Purchase Agreement").

WHEREAS, the execution and delivery of this Assignment is contemplated by Section 8(a)(v) of the Purchase Agreement;

WHEREAS, Assignor owns certain right, title and interest in and to the patents and patent applications identified in Schedule A, attached hereto and incorporated herein by reference (the "Patents"); and

WHEREAS, pursuant to the Purchase Agreement, Assignee desires to acquire the Patents, and Assignor wishes to assign its right, title and interest in and to the Patents to the Assignee, as Nalco's designee.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee, each intending to be legally bound, hereby agree as follows:

- 1. Assignor does hereby sell, assign, transfer and set over to Assignee, and Assignee hereby accepts Assignor's entire right, title and interest in and to the Patents, the same to be held and enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns or other legal representatives, to the end of the terms for which patents are granted or renewed as fully and entirely as the same would have been held or enjoyed by Assignor if this Assignment had not been made, including, but not limited to, (i) all worldwide patents, patent applications, reissues, divisionals, continuations, continuations-in-part, renewals, reexamination certificates claiming priority to the Patents and (ii) all rights and claims, including claims for damages, lost profits, royalties and benefits arising because of any past, present and future infringements, misappropriations or other violations of the Patents (together, the "Assigned Rights").
- 2. Assignor hereby authorizes and requests the Commissioner for Patents of the United States Patent and Trademark Office and any official of any other country, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to record and register this Assignment upon request by Assignee.
- 3. At Assignee's sole cost and expense, Assignee and Assignor shall, and shall cause their respective Affiliates to, cooperate, and use their commercially reasonable efforts to take, or cause to be taken, all action, and to do, or cause to be done, all things necessary, proper, or advisable under applicable laws and regulations to consummate the transactions contemplated by this Assignment.

- This Assignment and all claims relating to or arising out of the relationship of the parties hereto with respect to the subject matter hereof, shall be construed and interpreted in accordance with, and governed in all respects by, the internal laws of the State of Delaware (without giving effect to principles of conflicts of laws). Any Proceeding relating to this Assignment or the enforcement of any provision of this Assignment shall be brought or otherwise commenced exclusively in any state or federal court located in the State of Delaware. Each party to this Assignment: (i) expressly and irrevocably consents and submits to the jurisdiction of each state and federal court located in the State of Delaware (and each appellate court located in the State of Delaware), in connection with any Proceeding; (ii) agrees that service of any process, summons, notice or document by U.S. mail addressed to it at the address set forth in Section 25 of the Purchase Agreement, or as otherwise modified by notice, shall constitute effective service of such process, summons, notice or document for purposes of any such Proceeding; (iii) agrees that each state and federal court located in the State of Delaware, shall be deemed to be a convenient forum and (iv) agrees not to assert (by way of motion, as a defense or otherwise), in any such Proceeding commenced in any state or federal court located in the State of Delaware, any claim that it is not subject personally to the jurisdiction of such court, that such Proceeding has been brought in an inconvenient forum, that the venue of such proceeding is improper or that this Assignment or the subject matter of this Assignment may not be enforced in or by such court.
- 5. No alteration, modification or amendment of any provision of this Assignment shall be effective, unless the same shall be in writing and signed by Assignor, on the one hand, and Assignee, on the other hand. Any failure of any party to comply with any obligation, agreement or condition hereunder may only be waived in writing by the other party, but such waiver shall not operate as a waiver of, or estoppel with respect to, any subsequent or other failure. No failure by any party to take any action with respect to any breach of this Assignment or default by another party shall constitute a waiver of such party's right to enforce any provision hereof or to take any such action.
- 6. In case any term, provision, covenant or restriction contained in this Assignment is held to be invalid, illegal or unenforceable in any jurisdiction, the validity, legality and enforceability of the remaining terms, provisions, covenants or restrictions contained herein, and of such term, provision, covenant or restriction in any other jurisdiction, shall not in any way be affected or impaired thereby.
- 7. This Assignment may be executed in several counterparts (including by means of facsimile or electronic transmission in portable document format (PDF)), each of which shall be deemed an original and all of which shall constitute one and the same instrument, and shall become effective when counterparts have been signed by each of the parties and delivered to the other parties; it being understood that all parties need not sign the same counterparts.
- 8. Any capitalized term not otherwise defined in this Assignment shall have the meaning set forth for such term in the Purchase Agreement.

[Signature Page Follows]

ASSIGNOR:

ASSIGNEE:

GEORGIA-PACIFIC CHEMICALS LLC

By:

Name:

Name:

Name:

Name:

Title:

Title:

Each party hereto has caused this Assignment to be signed and executed by its undersigned

Each party hereto has caused this Assignment to be signed and executed by its undersigned officer thereunto duly authorized on the date written above.

ASSIGNOR:	ASSIGNEE:
GEORGIA-PACIFIC CHEMICALS LLC	ECOLAB USA INC.
Ву:	By: ////////////////////////////////////
Name:	Name: Michael McCRMRK
Title:	Title: Authorited Signatury

[Signature Page to Worldwide Patent Assignment]

SCHEDULE A PATENTS

1. The following Patents:

	-	-		**		
Title	Country	Status	Application #	Date Filed	Patent#	Grant Date
STYRENE-ACRYLATE						
COPOLYMER COMPOSITION	United of					
SULLABLE FOR SURFACE SIZE	States of					
APPLICATION	America	Issued	10/097,656	Mar 15, 2002	6734232	May 11, 2004
STYRENE-ACRYLATE						
COPOLYMER COMPOSITION						
SUITABLE FOR SURFACE SIZE						
APPLICATION	Canada	Issued	2,445,957	Mar 6, 2003	2445957	May 25, 2010
WET STRENGTH						
THERMOSETTING RESIN						
FORMULATIONS AND						
POLYAMINAMIDE POLYMERS						
SUITABLE FOR USE IN THE	United					
MANUFACTURE OF PAPER	States of					
PRODUCTS	America	Issued	09/129,304	Aug 5, 1998	6222006	Apr 24, 2001
GLYOXALATION						
POLYACRYLAMIDE	United					
COMPOSITION	States of					
STRENGTHENING AGENT	America	Issued	10/785,403	Feb 25, 2004	7119148	Oct 10, 2006
GLYOXALATED						
POLYACRYLAMIDE						
COMPOSITIONS	Canada	Issued	2,498,021	Feb 23, 2005	2498021	Nov 12, 2013
GLYOXALATED						
POLYACRYLAMIDE						
COMPOSITIONS	Canada	Issued	2,827,964	Feb 23, 2005	2827964	May 3, 2016

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ALDEHYDE SCAVENGERS FOR						
PREPARING TEMPORARY WET	United					
STRENGTH RESINS WITH	States of					
LONGER SHELF LIFE	America	Issued	10/919,487	Aug 17, 2004	7034087	Apr 25, 2006
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND	United					
PAPER STRENGTHENING	States of					
AGENTS	America	Issued	10/919,488	Aug 17, 2004	7488403	Feb 10, 2009
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND	United					
PAPER STRENGTHENING	States of					
AGENTS	America	Issued	12/275,619	Nov 21, 2008	7897013	Mar 1, 2011
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND						
PAPER STRENGTHENING						
AGENTS	Germany	Issued	09761116.4	Nov 20, 2009	602009027091.5	Oct 8, 2014
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND						
PAPER STRENGTHENING						
AGENTS	France	Issued	09761116.4	Nov 20, 2009	2358941	Oct 8, 2014
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND						
PAPER STRENGTHENING	United					
AGENTS	Kingdom	Issued	09761116.4	Nov 20, 2009	2358941	Oct 8, 2014
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND						
PAPER STRENGTHENING						
AGENTS	Canada	Issued	2,744,334	Nov 20, 2009	2744334	Jun 21, 2016
BLENDS OF GLYOXALATED						
POLYACRYLAMIDES AND	European					
PAPER STRENGTHENING	Patent					
AGENTS	Office	Issued	09761116.4	Nov 20, 2009	2358941	Oct 8, 2014

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	3032/13	Apr 17, 2012	3032/2013	Pending	Chile	AND USES THEREOF
						POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE,
		Apr 17, 2012	2,833,349	Pending	Canada	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
		Apr 17, 2012	BR1120130269138	Pending	Brazil	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
Mar 29, 2017	2699621	Apr 17, 2012	12774682.4	Issued	Sweden	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
Apr 24, 2017	502017000044557	Apr 17, 2012	12774682.4	Issued	Italy	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
Mar 29, 2017	2699621	Apr 17, 2012	12774682.4	Issued	United Kingdom	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
Mar 29, 2017	2699621	Apr 17, 2012	12774682.4	Issued	France	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
Mar 29, 2017	602012030504.5	Apr 17, 2012	12774682.4	Issued	Germany	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF

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POLYAMIDOAMINE-						
METHOD OF MANUFACTURE.	Patent					
AND USES THEREOF	Office	Issued	12774682.4	Apr 17, 2012	2699621	Mar 29, 2017
POLYAMIDOAMINE-						
EPIHALOHYDRIN RESINS,						
METHOD OF MANUFACTURE,						
AND USES THEREOF	Mexico	Pending	MX/a/2013/012319	Apr 17, 2012		
POLYAMIDOAMINE-						
EPIHALOHYDRIN RESINS,						
METHOD OF MANUFACTURE,						
AND USES THEREOF	India	Pending	3025/KPLNP/2013	Oct 17, 2013		
	United					
WET STRENGTH TREATED	States of					
PAPER AND PAPERBOARD	America	Issued	14/326,515	Jul 9, 2014	9499944	Nov 22, 2016
THERMOSETTING CREPING	United					
ADHESIVE WITH REACTIVE	States of					
MODIFIERS	America	Issued	13/037,681	Mar 1, 2011	8246781	Aug 21, 2012
THERMOSETTING CREPING						
ADHESIVE WITH REACTIVE						
MODIFIERS	Canada	Issued	2,798,789	Mar 1, 2011	2798789	Feb 7, 2017
THERMOSETTING CREPING						
ADHESIVE WITH REACTIVE						
MODIFIERS	China	Issued	201180024895.7	Mar 1, 2011	201180024895.7	Jul 2, 2014
THERMOSETTING CREPING						
ADHESIVE WITH REACTIVE						
MODIFIERS	India	Pending	3189/KOLNP/2012	Mar 1, 2011		
THERMOSETTING CREPING						
ADHESIVE WITH REACTIVE						
MODIFIERS	Mexico	Pending	MX/a/2012/013060	Mar 1, 2011		
ADDITIVES WITH CLOUD						
POINTS TO IMPROVE	United					
EFFICIENCY OF RELEASE	States of					
AGENTS	America	Issued	14/135,440	Dec 19, 2013	9180644	Nov 10, 2015

		Jul 18, 2013	153/KOLNP/2015	Pending	India	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
		Jul 18, 2013	13819897.3	Pending	European Patent Office	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
		Jul 18, 2013	201380046936.1	Pending	China	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
		Jul 18, 2013	2,879,669	Pending	Canada	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
Jun 2, 2015	9045862	Jul 18, 2013	13/944,923	Issued	United States of America	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
				In Preparation	United States of America	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
		Dec 19, 2013	MX/a/2015/008763	Pending	Mexico	ADDITIVES WITH CLOUD POINTS TO IMPROVE EFFICIENCY OF RELEASE AGENTS
		Dec 19, 2013	2095/KOLNP/2015	Pending	India	ADDITIVES WITH CLOUD POINTS TO IMPROVE EFFICIENCY OF RELEASE AGENTS
May 10, 2017	ZL201380071195.2	Dec 19, 2013	201380071195.2	Issued	China	ADDITIVES WITH CLOUD POINTS TO IMPROVE EFFICIENCY OF RELEASE AGENTS
		Dec 19, 2013	2,897,187	Pending	Canada	ADDITIVES WITH CLOUD POINTS TO IMPROVE EFFICIENCY OF RELEASE AGENTS

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	2895781	Dec 17, 2013	2,895,781	Pending	Canada	BLENDS OF POLYMERS AS WET STRENGTHENING AGENTS FOR PAPER
Apr 7, 2015	8999110	Dec 17, 2013	14/108,492	Issued	United States of America	BLENDS OF POLYMERS AS WET STRENGTHENING AGENTS FOR PAPER
		Oct 15, 2015	MX/a/2017/004979	Pending	Mexico	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME
		Oct 15, 2015		Pending	India	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME
		Oct 15, 2015	EP15850261.7	Pending	European Patent Office	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME
		Oct 15, 2015	2,964,972	Pending	Canada	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME
		Oct 15, 2015	14/884,723	Pending	United States of America	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME
		May 27, 2016	PCT/US16/34884	Pending	PCT	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
Oct 3, 2017	9777436	May 29, 2015	14/725,384	Allowed	United States of America	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
		May 29, 2015	14/725,403	Pending	United States of America	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS
		Jul 18, 2013	MX/a/2015/000824	Pending	Mexico	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS

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BLENDS OF POLYMERS AS						
WET CTRENCTHENING						
AGENTS FOR PAPER	India	Pending	1921/KOLNP/2015	Dec 17, 2013		
BLENDS OF POLYMERS AS						
WET STRENGTHENING						
AGENTS FOR PAPER	Mexico	Pending	MX/a/2015/008101	Dec 17, 2013		
BLENDS OF POLYMERS AS	United					
WET STRENGTHENING	States of					
AGENTS FOR PAPER	America	Issued	14/679,417	Apr 6, 2015	9506196	Nov 29, 2016
PAPER PRODUCTS						
CONTAINING A POLYMERIC	United					
WET STRENGTHENING	States of					
AGENT	America	Issued	14/679,442	Apr 6, 2015	9353483	May 31, 2016
BLENDS OF POLYMERS AS	United					
WET STRENGTHENING	States of					
AGENTS FOR PAPER	America	Pending	15/162,016	May 23, 2016		
GREASEPROOF PAPER WITH						
LOWER CONTENT OF						
FLUOROCHEMICALS	Chile	Pending	0914-2015	Oct 10, 2013		
GREASEPROOF PAPER WITH						
LOWER CONTENT OF						
FLUOROCHEMICALS	China	Pending	201380060001.9	Oct 10, 2013		
GREASEPROOF PAPER WITH						
LOWER CONTENT OF						
FLUOROCHEMICALS	India	Pending	1211/KOLNP/2015	Oct 10, 2013		
GREASEPROOF PAPER WITH						
LOWER CONTENT OF	Republic of					
FLUOROCHEMICALS	Korea	Pending	2015-7011424	Oct 10, 2013		
GREASEPROOF PAPER WITH						
LOWER CONTENT OF						
FLUOROCHEMICALS	Mexico	Pending	MX/a/2015/004647	Oct 10, 2013		

DRODITOTS WET						
ENCOCIO, WEI	Traitad					
STRENGTHENING RESINS,	United					
AND METHODS FOR MAKING	States of					
AND USING SAME	America	Issued	14/668,097	Mar 25, 2015	9695552	Jul 4, 2017
WET STRENGTHENED FIBER						
PRODUCTS, WET						
STRENGTHENING RESINS,	European					
AND METHODS FOR MAKING	Patent					
AND USING SAME	Office	Pending	15769072.8	Mar 25, 2015		
WET STRENGTHENED FIBER						
PRODUCTS, WET						
STRENGTHENING RESINS,	United					
AND METHODS FOR MAKING	States of					
AND USING SAME	America	Pending	15/634,615	Jun 27, 2017		
RELEASE AIDS WITH	United					
ADJUSTABLE CLOUD POINTS	States of					
FOR CREPING PROCESSESS	America	Issued	14/576,789	Dec 19, 2014	9243365	Jan 26, 2016
RELEASE AIDS WITH						
ADJUSTABLE CLOUD POINTS						
FOR CREPING PROCESSESS	Canada	Pending	2,934,689	Dec 19, 2014		
RELEASE AIDS WITH						
ADJUSTABLE CLOUD POINTS						
FOR CREPING PROCESSESS	Mexico	Pending	MX/a/2016/008271	Dec 19, 2014		
CREPING ADHESIVES						
CONTAINING						
FUNCTIONALIZED						
CROSSLINKED RESINS	PCT	Pending	PCT/US16/38920	Jun 23, 2016		
CREPING ADHESIVES AND	United					
METHODS FOR MAKING AND	States of					
USING SAME	America	Issued	14/535,320	Nov 7, 2014	9611590	Apr 4, 2017
CREPING ADHESIVES AND						
METHODS FOR MAKING AND						
USING SAME	Canada	Pending	2,929,961	Nov 7, 2014		
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		Jun 26, 2017	15/633,133	Pending	America	PAPER PRODUCTS
					United States of	STRENGTHENING RESINS FOR
Jun 27, 2017	9689114	Aug 7, 2015	14/820,580	Issued	America	PAPER PRODUCTS
					States of	STRENGTHENING RESINS FOR
					United	
		Apr 3, 2017	15/478,203	Pending	America	USING SAME
					States of	METHODS FOR MAKING AND
					United	CREPING ADHESIVES AND
		Nov 7, 2014	MX/a/2016/005923	Pending	Mexico	USING SAME
						METHODS FOR MAKING AND
						CREPING ADHESIVES AND
		Nov 7, 2014	14859971.5	Pending	Office	USING SAME
					Patent	METHODS FOR MAKING AND
					European	CREPING ADHESIVES AND

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GLYOXALATION POLYACRYLAMIDE COMPOSITION STRENGTHENING AGENT	STYRENE-ACRYLATE COPOLYMER COMPOSITION SUITABLE FOR SURFACE SIZE APPLICATION	STYRENE-ACRYLATE COPOLYMER COMPOSITION SUITABLE FOR SURFACE SIZE APPLICATION	STYRENE-ACRYLATE COPOLYMER COMPOSITION SUITABLE FOR SURFACE SIZE APPLICATION	WET STRENGTH AGENT FORMULATIONS AND PREPOLYMERS SUITABLE FOR USE IN THE MANUFACTURE OF ABSORBENT PAPER PRODUCTS	WET STRENGTH AGENT FORMULATIONS AND PREPOLYMERS SUITABLE FOR USE IN THE MANUFACTURE OF ABSORBENT PAPER PRODUCTS	WET STRENGTH AGENT FORMULATIONS AND PREPOLYMERS SUITABLE FOR USE IN THE MANUFACTURE OF ABSORBENT PAPER PRODUCTS	Title
United States of America	PCT	Canada	United States of America	United States of America	United States of America	United States of America	Country
Issued	Pending	Pending	Pending	Issued	Abandoned	Abandoned	Status
10785403	PCTUS0306622	2445957	10097656	09129304	09018196	08910638	Application #
Feb 25, 2004	Mar 6, 2003	Mar 6, 2003	Mar 15, 2002	Aug 5, 1998	Feb 4, 1998	Aug 13, 1997	Date Filed
7119148				6222006			Patent #
Oct 10, 2006				Apr 24, 2001			Grant Date

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BLENDS OF ANIONIC COPOLYMERS SUITABLE FOR SURFACE SIZE AND METHODS OF MAKING THE SAME	BLENDS OF ANIONIC COPOLYMERS SUITABLE FOR SURFACE SIZE AND METHODS OF MAKING THE SAME	POLYACRYLAMIDE-BASED STRENGTHENING AGENT	POLYACRYLAMIDE-BASED STRENGTHENING AGENT	METHOD OF STABILIZING AQUEOUS CATIONIC POLYMERS	BLENDS OF ANIONIC COPOLYMERS SUITABLE FOR SURFACE SIZE AND METHODS OF MAKING THE SAME	POLYACRYLAMIDE-BASED STRENGTHENING AGENT	GLYOXALATED INTER- COPOLYMERS WITH HIGH AND ADJUSTABLE CHARGE DENSITY	GLYOXALATED POLYACRYLAMIDE COMPOSITIONS	GLYOXALATED POLYACRYLAMIDE COMPOSITIONS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	ALDEHYDE-SCAVENGERS FOR PREPARING TEMPORARY WET STRENGTH RESINS WITH LONGER SHELF LIFE
Canada	United States of America	PCT	Canada	United States of America	United States of America	United States of America	United States of America	Canada	Canada	United States of America	United States of America
Pending	Issued	Pending	Issued	Issued	Pending	Issued	Issued	Issued	Issued	Issued	Issued
2679740	12038250	PCTUS0783856	2669206	11830426	60892382	11613758	11136730	2498021	CA2827964	10919488	10919487
Feb 29, 2008	Feb 27, 2008	Nov 7, 2007	Nov 7, 2007	Jul 30, 2007	Mar 1, 2007	Dec 20, 2006	May 25, 2005	Feb 23, 2005	Feb 23, 2005	Aug 17, 2004	Aug 17, 2004
	8557925		2669206	7868071		7863395	7589153	2498021	2827964	7488403	7034087
	Oct 15, 2013		Jan 6, 2015	Jan 11, 2011		Jan 4, 2011	Sep 15, 2009	Nov 12, 2013	May 3, 2016	Feb 10, 2009	Apr 25, 2006

BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS	AQUEOUS CATIONIC POLYMERS METHOD OF STABILIZING AQUEOUS CATIONIC POLYMERS	METHOD OF STABILIZING AQUEOUS CATIONIC POLYMERS METHOD OF STABILIZING	METHOD OF STABILIZING AQUEOUS CATIONIC POLYMERS	BLENDS OF ANIONIC COPOLYMERS SUITABLE FOR SURFACE SIZE AND METHODS OF MAKING THE SAME
United Kingdom	France	European Patent Office	Germany	Canada	United States of America	Mexico PCT	European Patent Office	Canada	PCT
Issued	Issued	Issued	Issued	Issued	Issued	Issued Pending	Pending	Issued	Pending
0907611164	0907611164	0907611164	097611164	2744334	12275619	MXA10000874 PCTUS0871353	087967220	2695007	PCTUS0855413
Nov 20, 2009	Nov 21, 2008	Jul 28, 2008 Jul 28, 2008	Jul 28, 2008	Jul 28, 2008	Feb 29, 2008				
2358941	2358941	2358941	602009027091.5	2744334	7897013	287802		CA2695007A1	
Oct 8, 2014	Oct 8, 2014	Oct 8, 2014	Oct 8, 2014	Jun 21, 2016	Mar 1, 2011	Jun 27, 2011		May 20, 2014	

POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF	THERMOSETTING CREPING ADHESIVE WITH REACTIVE MODIFIERS	BLENDS OF GLYOXALATED POLYACRYLAMIDES AND PAPER STRENGTHENING AGENTS						
Canada	Brazil	United States of America	PCT	United States of America	Mexico	India	China	Canada	United States of America	PCT
Pending	Pending	Pending	Pending	Issued	Issued	Pending	Issued	Issued	Pending	Expired
2833349	BR1120130269138	61477679	PCTUS1126625	13037681	MXa2012013060	3189KOLNP2012	2011800248957	2798789	61346802	PCTUS0965343
Apr 17, 2012	Apr 17, 2012	Apr 21, 2011	Mar 1, 2011	Mar 1, 2011	Mar 1, 2011	Mar 1, 2011	Mar 1, 2011	Mar 1, 2011	May 20, 2010	Nov 20, 2009
				8246781	323999		201180024895.7	2798789		
				Aug 21, 2012	Sep 29, 2014		Jul 2, 2014	Feb 7, 2017		

POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF						
United States of America	Sweden	Mexico	Italy	India	United Kingdom	France	European Patent Office	Germany	Chile
Issued	Issued	Unfiled	Issued	Pending	Issued	Issued	Issued	Issued	Pending
13448982	127746824		127746824	3025KPLNP2013	127746824	127746824	127746824	127746824	30322013
Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012	Apr 17, 2012
8785593	2699621		502017000044557		2699621	2699621	2699621	602012030504.5	
Jul 22, 2014	Mar 29, 2017		Mar 29, 2017		Mar 29, 2017	Mar 29, 2017	Mar 29, 2017	Mar 29, 2017	

HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	WET STRENGTH TREATED PAPER AND PAPERBOARD	ADDITIVES WITH CLOUD POINTS TO IMPROVE EFFICIENCY OF RELEASE AGENTS	BLENDS OF POLYMERS AS WET STRENGTHENING AGENTS FOR PAPER	GREASEPROOF PAPER WITH LOWER CONTENT OF FLUOROCHEMICALS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	POLYAMIDOAMINE- EPIHALOHYDRIN RESINS, METHOD OF MANUFACTURE, AND USES THEREOF
United States of America	Mexico	India	European Patent Office	China	Canada	United States of America	United States of America	United States of America	United States of America	United States of America	PCT
Issued	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
13944923	MXa2015000824	153KOLNP2015	1308198973	2013800469361	2879669	61846855	61748781	61739329	61713346	61673534	PCTUS1233938
Jul 18, 2013	Jul 16, 2013	Jan 4, 2013	Dec 19, 2012	Oct 12, 2012	Jul 19, 2012	Apr 17, 2012					
9045862											
Jun 2, 2015											

RELEASE AIDS WITH ADJUSTABLE CLOUD POINTS FOR CREPING PROCESSES Mexico	RELEASE AIDS WITH ADJUSTABLE CLOUD POINTS FOR CREPING PROCESSES Canada	CREPING ADHESIVES AND METHODS FOR MAKING AND USING SAME PCT	CREPING ADHESIVES AND METHODS FOR MAKING AND United States USING SAME of America	CREPING ADHESIVES AND METHODS FOR MAKING AND USING SAME Mexico	CREPING ADHESIVES AND METHODS FOR MAKING AND USING SAME Patent Office	CREPING ADHESIVES AND METHODS FOR MAKING AND USING SAME Canada	RESIN COMPOSITIONS AND METHODS FOR MAKING AND United States USING SAME of America	STRENGTHENING RESINS AND METHODS FOR MAKING AND United States of America	PAPER AND PAPERBOARD PCT	WET STRENGTH TREATED PAPER AND PAPERBOARD United States of America	WET STRENGTHENED FIBER PRODUCTS, WET STRENGTHENING RESINS, AND METHODS FOR MAKING AND USING SAME USING SAME of America
Pending	Pending	Pending	Issued	Pending	Pending	Pending	Pending	Pending	Pending	Issued	Pending
MXa2016008271	2934689	PCTUS14064454	14535320	MXa2016005923	148599715	2929961	62064508	62034375	PCTUS1445843	14326515	61970985
Dec 19, 2014	Dec 19, 2014	Nov 7, 2014	Nov 7, 2014	Nov 7, 2014	Nov 7, 2014	Nov 7, 2014	Oct 16, 2014	Aug 7, 2014	Jul 9, 2014	Jul 9, 2014	Mar 27, 2014
			9611590							9499944	
			Apr 4, 2017							Nov 22, 2016	

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CREPING ADHESIVES CONTAINING FUNCTIONALIZED CROSSLINKED RESINS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	BLENDS OF POLYMERS AS WET STRENGTHENING AGENTS FOR PAPER	BLENDS OF POLYMERS AS WET STRENGTHENING AGENTS FOR PAPER	WET STRENGTHENED FIBER PRODUCTS, WET STRENGTHENING RESINS, AND METHODS FOR MAKING AND USING SAME	WET STRENGTHENED FIBER PRODUCTS, WET STRENGTHENING RESINS, AND METHODS FOR MAKING AND USING SAME	WET STRENGTHENED FIBER PRODUCTS, WET STRENGTHENING RESINS, AND METHODS FOR MAKING AND USING SAME	RELEASE AIDS WITH ADJUSTABLE CLOUD POINTS FOR CREPING PROCESSES	RELEASE AIDS WITH ADJUSTABLE CLOUD POINTS FOR CREPING PROCESSES
United States of America	United States of America	United States of America	United States of America	United States of America	PCT	United States of America	European Patent Office	PCT	United States of America
Pending	Issued	Allowed	Pending	Issued	Pending	Issued	Pending	Pending	Issued
62184452	14725384	14725403	14679442	14679417	PCTUS1522424	14668097	1507690728	PCTUS1471748	14576789
Jun 25, 2015	May 29, 2015	May 29, 2015	Apr 6, 2015	Apr 6, 2015	Mar 25, 2015	Mar 25, 2015	Mar 25, 2015	Dec 19, 2014	Dec 19, 2014
	9777436			9506196		9695552			9243365
	Oct 3, 2017			Nov 29, 2016		Jul 4, 2017			Jan 26, 2016

HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	HIGH EFFICIENCY WET STRENGTH RESINS FROM NEW CROSS-LINKERS	BLENDS OF POLYMERS AS WET STRENGTHENING AGENTS FOR PAPER	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	RESIN COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	CREPING ADHESIVES CONTAINING FUNCTIONALIZED CROSSLINKED RESINS	STRENGTHENING RESINS AND METHODS FOR MAKING AND USING SAME	STRENGTHENING RESINS AND METHODS FOR MAKING AND USING SAME
Canada	Brazil	United States of America	PCT	United States of America	Mexico	India	European Patent Office	Canada	United States of America	PCT	United States of America
Pending	Pending	Issued	Pending	Pending	Issued						
2987852	BR1120170255669	15162016	PCTUS1555834	14884723	MXa2017004979		EP158502617	2964972	62241453	PCTUS1544137	14820580
May 27, 2016	May 27, 2016	May 23, 2016	Oct 15, 2015	Oct 14, 2015	Aug 7, 2015	Aug 7, 2015					
		9834890									9689114
		Dec 5, 2017									Jun 27, 2017

PAPER of	STRENGTHENING AGENTS FOR U	BLENDS OF POLYMERS AS WET	CROSS-LINKERS of	STRENGTH RESINS FROM NEW U	HIGH EFFICIENCY WET	USING SAME of	METHODS FOR MAKING AND U	STRENGTHENING RESINS, AND	PRODUCTS, WET	WET STRENGTHENED FIBER	PAPER PRODUCTS of	STRENGTHENING RESINS FOR U	USING SAME of	METHODS FOR MAKING AND U	CREPING ADHESIVES AND	CROSSLINKED RESINS P	CONTAINING FUNCTIONALIZED	CREPING ADHESIVES
of America	United States		of America	United States		of America	United States				of America	United States	of America	United States		PCT		
Pending			Pending			Pending					Pending		Pending			Pending		
15831161			15722944			15634615					15633133		15478203			PCTUS1638920		
Dec 4, 2017			Oct 2, 2017			Jun 27, 2017					Jun 26, 2017		Apr 3, 2017			Jun 23, 2016		

PATENT REEL: 045221 FRAME: 0799

RECORDED: 02/01/2018