FORM PTO-1619A Expires 06/30/99	01 - 19 - 2001 U.S. Department of Commerce Patent and Trademark Office	1
	PATENT	
MRD 15/01	101588494	
	Please record the attached original document(s) or copy(ies).	
Submission Type New Resubmission (Non-Recordation) Document ID#	Conveyance Type Assignment Security Agreement Change of Name	
Correction of PTO Error	☐ Merger ☐ Other Notice of Grant of Security Intere U.S. Government (For Use ONLY by U.S. Government Agencies)	st
Reel # Frame #	Departmental File Secret File	
Corrective Document Reel# Frame #		
Conveying Party(ies) Mark if addition	nal names of conveying parties attached	
	2001 Execution Date Month Day Year	
Name (line 1) Hercules Incorporated, a Delaw	vare corporation 11/14/00	
Name (line 2)		
Second Party	Execution Date	
Name (line 1) Hercules Credit, Inc., a Delawa	mre corporation Month Day Year [11/14/00]	
Name (line 2)		
Receiving Party	nal names of receiving parties attached If document to be recorded is an assig	nment
Name (line 1) Bank of America, N.A., as (niot domicilea in the	
Name (line 2)	United States, an appointment of a do	
Address (line 1) [101 N. Tryon Street	representative shou attached. (Designal must be a separate	
Address (line 2) Independence Center, 15 th F		
Address (line 3) Charlotte City	North Carolina State/Country Zip Code	
· ·	er for the first Receiving Party only.	
Name N/A		
Address (line 1)		
Address (line 2)		
Address (line 3)		
Address (line 4)		
/19/2001 DNGUYEN 00000106 5281378	FOR OFFICE USE ONLY	
document and gathering the data needed to complete the Cover Sheet. Information Officer, Washington, D.C. 20231 and to the Office of Information (0027), Washington, D.C. 20503. See OMB Information Collection Budg RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.	to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief rmation and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project get Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUEST recorded with required cover sheet(s) information to:	t (06 5 1-

Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

FORM PTO-1			Doo	- 2		Department of Commerce
Expires 06/30 OMB 0651-00			Pag	e 2	Pat	ent and Trademark Office PATENT
Correspondent l	Name and Address					(010) 286 8000
				Area Code and	1 relephone Number	er (919) 286-8000
Name	Steven D. Thon	nas				
Address (line 1)	Moore & Van A	Allen PLLC				
Address (line 2)	2200 West Mai	n Street				
Address (line 3)	Suite 800					
Address (line 4)	Durham, North	Carolina 2770)5			
Pages	Enter the total num	ber of pages of the	e attached c	onveyance docume	nt	
0	including any attac			•		#
	mber(s) or Patent N her the Patent Applic		ie Patent Nu		onal numbers attack	hed for the same property).
	Patent Application 1	Number(s)			Patent Numb	per(s)
				5281378	5292590	5318669
				5393338	5456800	5288348
	eing filed together with a timed executing inventor.	n <u>new</u> Patent Application	on, enter the d	5341103 ate the patent application	5177163 on was	Month Day Year
Patent Coopera	tion Treaty (PCT)					
only if a	CT application number U.S. Application Number assigned.	lumber	PCT PCT	PCT PCT		PCT PCT
Number of Prop	perties I	Enter the total num	iber of prop	erties involved.	#	45
Fee Amount	I	Fee Amount for Pr	operties Lis	ted (37 CFR 3.41):	\$ [1,8	00.00
Deposit	of Payment: I Account for payment by deposi	I	itional fees c Deposit Acc	oosit Account	#	13-4365 No 🗆
documen Steven	gnature est of my knowledge and it. Charges to deposit of D. Thomas of Person Signing	d belief, the foregoing account are authorize	ed, de i <u>ndic</u> ate	is true and correct and d herein Signature	d any attached copy is	a true copy of the original Date Signed
name o	vi i eraon pigning		,	ASHALAI C		V Law Signed

U.S. Department of Commerce Patent and Trademark Office PATENT

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

Conveying Party(ies) Mark i	FATENTS ONLY fadditional names of conveying partie	es attached	
Enter Additional Con		additional names of conveying paren		
			Execution Date Month Day Year	
Name (line 1)	Hercules Flavor, Inc., a De	laware corporation	11/14/00	
Name (line 2)			Execution Date Month Day Year	
Name (line 1)	WSP, Inc., a Delaware cor	poration	11/14/00	
Name (line 2)			Execution Date Month Day Year	
Name (line 1)	Aqualon Company, a Dela	ware partnership	11/14/00	
Name (line 2)				
Receiving Party(ies Enter Additional Rec		Mark if additional names of receiving	ng parties attached If document to b is an assignment receiving party i	and the
Name (line 1)			domiciled in the	United
Name (line 2)			domestic represe	entative
Address (line 1)			(Designation mu separate docume	ist be a
Address (line 2)			Assignment.)	
Address (line 3)	City	State/Country	Zip Code	
	City	State/Country	If document to b	e recorded
Name (line 1)			is an assignment receiving party i	s not
Name (line 2)			domiciled in the States, an appoin domestic represe	ntment of a
Address (line 1)			should be attach (Designation mu	ed.
Address (line 2)			separate docume Assignment.)	ent from
Address (line 3)				
	City	State/Country	Zip Code	
	r(s) or Patent Number(s) ther the Patent Application Number of	Mark if additionary the Patent Number (DO NOT ENTER	al numbers attached BOTH numbers for the same property,).
Pa	tent Application Number(s)		Patent Number(s)	
		5674358	5371305 53245	31
		5330457	5620727 55343	40
		5338406	5629080 54074	75
		5334177	6054511 55544	41
		5257982	5545481 RE349	904

FORM PTO-16190	
Expires 06/30/99	
OMB 0651-0027	

U.S. Department of Commerce Patent and Trademark Office **PATENT**

RECORDATION FORM COVER SHEET

CONTINUATION PATENTS ONLY				
Conveying Party(ies) Mark if additional names of conveying parties attached				
Enter Additional Conveying Party	Execution Date			
Name (line 1) Hercules Finance Company, a Delaware partnership	Month Day Year 11/14/00			
Name (line 2)	Execution Date			
Name (line 1) Fibervisions, L.L.C., a Delaware limited liability company	Month Day Year			
Name (line 2)	Execution Date			
Name (line 1) Fibervisions Incorporated, a Delaware corporation	Month Day Year			
Name (line 2)	11/14/00			
Receiving Party(ies) Mark if additional names of receiving parties Enter Additional Receiving Party	attached If document to be recorded is an assignment and the			
Name (line 1)	receiving party is not domiciled in the United			
Name (line 2)	States, an appointment of a domestic representative			
Address (line 1)	should be attached. (Designation must be a separate document from			
Address (line 2)	Assignment.)			
Address (line 3) City State/Country	Zip Code			
City State/Country	If document to be recorded			
Name (line 1)	is an assignment and the receiving party is not domiciled in the United			
Name (line 2)	States, an appointment of a domestic representative			
Address (line 1)	should be attached. (Designation must be a			
Address (line 2)	separate document from Assignment.)			
Address (line 3) City State/Country	Zip Code			
Application Number(s) or Patent Number(s) Mark if additional number Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH nu				
Patent Application Number(s) Patent	nt Number(s)			
5391670 547	0640 5411693			
5393812 614	3346 5502091			
5403426 602	5311 5554435			
5522904 568	5815 5714552			
5494509 552	5664 5525738			

U.S. Department of Commerce Patent and Trademark Office PATENT

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

Conveying Party(ies	PATENTS ONLY Mark if additional names of conveying parties attach	ad
Enter Additional Cor		eu
		Execution Date Month Day Year
Name (line 1)	Fibervisions Products, Inc., a Georgia corporation	11/14/00
Name (line 2)		Execution Date Month Day Year
Name (line 1)	Hercules International Limited, a Delaware corporation	11/14/00
Name (line 2)		Execution Date Month Day Year
Name (line 1)	Betzdearborn Inc., a Pennsylvania corporation	11/14/00
Name (line 2)		
Receiving Party(ies		
Enter Additional Re	ceiving Party	If document to be recorded is an assignment and the
Name (line 1)		receiving party is not domiciled in the United
Name (line 2)		States, an appointment of a domestic representative
Address (line 1)		should be attached. (Designation must be a separate document from
Address (line 2)		Assignment.)
Address (line 3)	City State/Country	Zip Code
	5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0,	If document to be recorded
Name (line 1)		is an assignment and the receiving party is not
		domiciled in the United States, an appointment of a
Name (line 2)		domestic representative should be attached.
Address (line 1)		(Designation must be a separate document from
Address (line 2)		Assignment.)
Address (line 3)		
	City State/Country	Zip Code
	r(s) or Patent Number(s) Mark if additional number her the Patent Number (DO NOT ENTER BOTH n	
		ent Number(s)
	5656699 568	33809
		53607
	5484952	
	5521234	
	5721048	
	5485662	
DUR I\275825 1		

FORM PTO-16190
Expires 06/30/99
OMB 0651-0027

U.S. Department of Commerce Patent and Trademark Office PATENT

CONTINUATION PATENTS ONLY	
Conveying Party(ies) Mark if additional names of conveying parties attached	I
Enter Additional Conveying Party	Execution Date
Name (line 1) Betzdearborn Europe, Inc. a Pennsylvania corporation	Month Day Year 11/14/00
Name (line 2)	Execution Date
Name (line 1) D R C LTD., a Delaware corporation	Month Day Year 11/14/00
Name (line 2)	Execution Date
Name (line 1) BL Technologies, Inc., a Delaware corporation	Month Day Year 11/14/00
Name (line 2)	
Receiving Party(ies) Mark if additional names of receiving parties at Enter Additional Receiving Party	If document to be recorded
Name (line 1)	is an assignment and the receiving party is not
Name (line 2)	domiciled in the United States, an appointment of a domestic representative
Address (line 1)	should be attached. (Designation must be a
Address (line 2)	separate document from Assignment.)
Address (line 3)	
City State/Country	Zip Code If document to be recorded
Name (line 1)	is an assignment and the receiving party is not
Name (line 2)	domiciled in the United States, an appointment of a
Address (line 1)	domestic representative should be attached.
Address (line 2)	(Designation must be a separate document from Assignment.)
Address (line 3)	- Table Interest
City State/Country	Zip Code
Application Number(s) or Patent Number(s) Mark if additional numbers Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH num	
	Number(s)

U.S. Department of Commerce Patent and Trademark Office PATENT

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

PATENTS ONLY				
Conveying Party(ies		itional names of conveying parties atta	ched	
Enter Additional Con	eying Party			
			Execution Date	
Name (line 1)	BLI Holdings Corp., a Delawa	re corporation	Month Day Year	
, ,	DEI Holdings Corp., a Delawa	re corporation	11/14/00	
Name (line 2)			Execution Date	
N			Month Day Year	
Name (line 1)	Hercules Shared Services Corp	oration, a Delaware corporation	n 11/14/00	
Name (line 2)			Execution Date	
rame (me 2)			Month Day Year	
Name (line 1)	Betzdearborn International, Inc	2 Pennsylvania corporation	11/14/00	
	Detzeedroom memanonar, me	z., a remisyrvama corporation	11/14/00	
Name (line 2)			7	
'				
Dansiving Dantyline		1.10 1.12		
Receiving Party(ies) Enter Additional Rec		ark if additional names of receiving par	If document to be recorded	
Litter Additional Rec	civing 1 arty	,	is an assignment and the	
Name (line 1)			receiving party is not	
			domiciled in the United States, an appointment of a	
Name (line 2)			domestic representative	
Address (line 1)			should be attached.	
Address (line 1)			(Designation must be a separate document from	
Address (line 2)			Assignment.)	
(11111-12)			3	
Address (line 3)				
	City	State/Country	Zip Code	
			If document to be recorded	
			is an assignment and the	
Name (line 1)			receiving party is not domiciled in the United	
Nome (line 2)			States, an appointment of a	
Name (line 2)			domestic representative	
Address (line 1)			should be attached. (Designation must be a	
(,			separate document from	
Address (line 2)			Assignment.)	
Address (line 3)	City			
	City	State/Country	Zip Code	
Application Number	s) or Patent Number(s)	Mark if additional num	hers attached	
		Patent Number (DO NOT ENTER BOTH		
Pat	ent Application Number(s)	Pa	atent Number(s)	

DUR1\275825_1

U.S. Department of Commerce Patent and Trademark Office **PATENT**

	RECOR	CONTINUATION PATENTS ONLY		
Conveying Party(ies) Enter Additional Conveying Par		ditional names of conveying parti	es attached	
Enter Additional Conveying Par	y		Execution Month Day	
Name (line 1) Athens	Holdings, Inc., a Dela	ware corporation	11/14/00	rear
Name (line 2)			Execution	
Name (line 1) Betzdea	rborn China, Ltd., a D	Delaware corporation	Month Day 11/14/00	y Year
Name (line 2)			Execution	
Name (line 1) BL Che	micals Inc., a Delawa	re corporation	Month Day 11/14/00	y Year
Name (line 2)				
Receiving Party(ies) Enter Additional Receiving Party	ty N	Mark if additional names of receiving	If do	cument to be recorded
Name (line 1)			recei	assignment and the ving party is not ciled in the United
Name (line 2)			State	s, an appointment of a
Address (line 1)			(Desi	d be attached. gnation must be a
Address (line 2)				ate document from gnment.)
Address (line 3)				
	City	State/Country	Zip Code	
Name (line 1)			is an	assignment and the ving party is not
			domi	ciled in the United
Name (line 2)			dome	estic representative
Address (line 1)			(Desi	gnation must be a atte document from
Address (line 2)				nment.)
Address (line 3)	City	614/6		
		State/Country	Zip Code	
Application Number(s) or Pater Enter either the Pater		Mark if additiona e Patent Number (DO NOT ENTER	al numbers attached BOTH numbers for the same	property).
Patent Applie	cation Number(s)		Patent Number(s)	

U.S. Department of Commerce Patent and Trademark Office PATENT

RECORDATION FORM COVER SHEET

CONTINUATION PATENTS ONLY	
Conveying Party(ies) Mark if additional names of conveying parties attached	
Enter Additional Conveying Party	Execution Date Month Day Year
Name (line 1) Chemical Technologies India, Ltd., a Delaware corporation	11/14/00
Name (line 2)	Execution Date Month Day Year
Name (line 1) Covington Holdings, Inc., a Delaware corporation	11/14/00
Name (line 2)	Execution Date Month Day Year
Name (line 1) East Bay Realty Services, Inc., a Delaware corporation	11/14/00
Name (line 2)	
Receiving Party(ies) Mark if additional names of receiving parties at Enter Additional Receiving Party	If document to be recorded
Name (line 1)	is an assignment and the receiving party is not domiciled in the United
Name (line 2)	States, an appointment of a domestic representative
Address (line 1)	should be attached. (Designation must be a separate document from
Address (line 2)	Assignment.)
Address (line 3) City State/Country	Zip Code If document to be recorded is an assignment and the
Name (line 1)	receiving party is not domiciled in the United
Name (line 2)	States, an appointment of a domestic representative should be attached.
Address (line 1)	(Designation must be a separate document from
Address (line 2)	Assignment.)
Address (line 3) City State/Country	Zip Code
Application Number(s) or Patent Number(s) Mark if additional numbers a Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH number)	
Patent Application Number(s) Patent 1	Number(s)

DUR1\275825_1

U.S. Department of Commerce Patent and Trademark Office PATENT

	RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY	
Conveying Party(ies)		· · · · · · · · · · · · · · · · · · ·
Enter Additional Conv	weying Party	Execution Date
.		Month Day Year
Name (line 1)	Fibervisions, L.P., a Delaware limited partnership	11/14/00
Name (line 2)		Execution Date
Name (line 1)	Hercules Chemical Corporation, a Delaware corporation	Month Day Year 11/14/00
Name (line 2)		Execution Date
Name (line 1)	Hamila Carret Cl. L. D. L.	Month Day Year
Į.	Hercules Country Club, Inc., a Delaware corporation	11/14/00
Name (line 2)		
Receiving Party(ies) Enter Additional Receiving		ached If document to be recorded
		is an assignment and the
Name (line 1)		receiving party is not domiciled in the United
Name (line 2)		States, an appointment of a domestic representative
Address (line 1)		should be attached. (Designation must be a
Address (line 2)		separate document from Assignment.)
Address (line 3)		
	City State/Country	Zip Code
		If document to be recorded
Name (line 1)		is an assignment and the receiving party is not
Name (line 2)		domiciled in the United States, an appointment of a
Name (me 2)		domestic representative should be attached.
Address (line 1)		(Designation must be a
Address (line 2)		separate document from Assignment.)
Address (line 3)		
,	City State/Country	Zip Code
	s) or Patent Number(s) Mark if additional numbers at the Patent Application Number or the Patent Number (DO NOT ENTER BOTH number)	tached
Pate	ent Application Number(s) Patent N	umber(s)

U.S. Department of Commerce Patent and Trademark Office PATENT

RECORDATION FORM COVER SHEET

	CONTINUATION PATENTS ONLY	
Conveying Party(ies	Mark if additional names of conveying parties attached	
Enter Additional Con	veying Party	Execution Date Month Day Year
Name (line 1)	Hercules Euro Holdings, LLC, a Delaware limited liability company	11/14/00
Name (line 2)		Execution Date Month Day Year
Name (line 1)	Hercules International Limited, L.L.C., a Delaware limited liability company	11/14/00
Name (line 2)		Execution Date Month Day Year
Name (line 1)	Hercules Investments, LLC, a Delaware limited liability company	11/14/00
Name (line 2)		
Receiving Party(ies Enter Additional Re		ttached If document to be recorded is an assignment and the
Name (line 1)		receiving party is not domiciled in the United
Name (line 2)		States, an appointment of a domestic representative should be attached.
Address (line 1)		(Designation must be a separate document from
Address (line 2)		Assignment.)
Address (line 3)	City State/Country	Zip Code If document to be recorded is an assignment and the
Name (line 1)		receiving party is not domiciled in the United
Name (line 2)		States, an appointment of a domestic representative should be attached.
Address (line 1)		(Designation must be a separate document from
Address (line 2)		Assignment.)
Address (line 3)		
	City State/Country r(s) or Patent Number(s)	
Pa	atent Application Number(s) Patent	Number(s)

U.S. Department of Commerce Patent and Trademark Office **PATENT**

CONTINUATION PATENTS ONLY	
Conveying Party(ies) Mark if additional names of conveying partie Enter Additional Conveying Party	es attached
Enter Additional Conveying Party	Execution Date Month Day Year
Name (line 1) Hispan Corporation, a Delaware corporation	11/14/00
Name (line 2)	Execution Date Month Day Year
Name (line 1)	Manus Day Ital
Name (line 2)	Execution Date Month Day Year
Name (line 1)	
Name (line 2)	
Receiving Party(ies) Enter Additional Receiving Party Mark if additional names of receiving Party	ng parties attached If document to be recorded is an assignment and the
Name (line 1)	receiving party is not domiciled in the United
Name (line 2)	States, an appointment of a domestic representative
Address (line 1)	should be attached. (Designation must be a separate document from
Address (line 2)	Assignment.)
Address (line 3)	
City State/Country	Zip Code If document to be recorded
Name (line 1)	is an assignment and the receiving party is not
Name (line 1)	domiciled in the United States, an appointment of a
Name (line 2)	domestic representative should be attached.
Address (line 1)	(Designation must be a separate document from
Address (line 2)	Assignment.)
Address (line 3) City State/Country	Zip Code
·	ıl numbers attached
Patent Application Number(s)	Patent Number(s)

DUR1\275825_1

NOTICE

OF

GRANT OF SECURITY INTEREST

 \mathbb{N}

PATENTS

United States Patent and Trademark Office

Gentlemen:

Please be advised that pursuant to the Security Agreement dated as of November 14, 2000 (the "Security Agreement") by and among the Obligors party thereto (each an "Obligor" and collectively, the "Obligors") and Bank of America, N.A., as Collateral Agent (the "Agent") for the Secured Parties referenced therein (the "Secured Parties"), each of the undersigned Obligors has granted a continuing security interest in and continuing lien upon, the patents and patent applications to the extent owned by such Obligor and shown on the attached Schedule A to the Collateral Agent for the ratable benefit of the Secured Parties:

The Obligors and the Collateral Agent, on behalf of the Secured Parties, hereby acknowledge and agree that the security interest in the foregoing patents and patent applications (i) may only be terminated in accordance with the terms of the Security Agreement and (ii) is not to be construed as an assignment of any patent or patent application.

Very truly yours,

HERCULES INCORPORATED,

a Delaware corporation

HERCULES CREDIT, INC.,

a Delaware corporation

HERCULES FLAVOR, INC.,

a Delaware corporation

WSP, INC.,

a Delaware corporation

AQUALON COMPANY,

a Delaware partnership

HERCULES FINANCE COMPANY,

a Delaware partnership

FIBERVISIONS, L.L.C.,

a Delaware limited liability company

FIBERVISIONS INCORPORATED,

a Delaware corporation

FIBERVISIONS PRODUCTS, INC.,

a Georgia corporation

HERCULES INTERNATIONAL LIMITED,

a Delaware corporation

BETZDEARBORN INC.,

a Pennsylvania corporation

BETZDEARBORN EUROPE, INC.,

a Pennsylvania corporation

DRCLTD.,

a Delaware corporation

BL TECHNOLOGIES, INC.,

a Delaware corporation

BLI HOLDINGS CORP.,

a Delaware corporation

HERCULES SHARED SERVICES CORPORATION,

a Delaware corporation

BETZDEARBORN INTERNATIONAL, INC.,

a Pennsylvania corporation

ATHENS HOLDINGS, INC.,

a Delaware corporation

[signature pages continue]

BETZDEARBORN CHINA, LTD., a Delaware corporation BL CHEMICALS INC., a Delaware corporation

CHEMICAL TECHNOLOGIES INDIA, LTD.,

a Delaware corporation COVINGTON HOLDINGS, INC.,

a Delaware corporation

EAST BAY REALTY SERVICES, INC.,

a Delaware corporation

FIBERVISIONS, L.P.,

a Delaware partnership

HERCULES CHEMICAL CORPORATION,

a Delaware corporation

HERCULES COUNTRY CLUB, INC.,

a Delaware corporation

HERCULES EURO HOLDINGS, LLC,

a Delaware limited liability company

HERCULES INTERNATIONAL LIMITED, L.L.C.,

a Delaware limited liability company

HERCULES INVESTMENTS, LLC,

a Delaware limited liability company

HISPAN CORPORATION,

a Delaware corporation

By: ilarel 4. Hoyd
Name: Ismel J. Floud
Title: Duly Authorized Representative
for each of the foregoing

Acknowledged and Accepted: BANK OF AMERICA, N.A., as Collateral Agent By: _____ Name:____ Title:

BETZDEARBORN CHINA, LTD.,

a Delaware corporation

BL CHEMICALS INC.,

a Delaware corporation

CHEMICAL TECHNOLOGIES INDIA, LTD.,

a Delaware corporation

COVINGTON HOLDINGS, INC.,

a Delaware corporation

EAST BAY REALTY SERVICES, INC.,

a Delaware corporation

FIBERVISIONS, L.P.,

a Delaware partnership

HERCULES CHEMICAL CORPORATION,

a Delaware corporation

HERCULES COUNTRY CLUB, INC.,

a Delaware corporation

HERCULES EURO HOLDINGS, LLC,

a Delaware limited liability company

HERCULES INTERNATIONAL LIMITED, L.L.C.,

a Delaware limited liability company

HERCULES INVESTMENTS, LLC,

a Delaware limited liability company

HISPAN CORPORATION,

a Delaware corporation

By:	
Name:	
Title:_	
	for each of the foregoing

Acknowledged and Accepted:

BANK OF AMERICA, N.A., as Collateral Agent

By: Durld Sur Name: DONALD J. CHW

Title: MANAGING DIRECTOR

Hercules Patents World-wide By Country - United States Date of Report: 13N02000

****	******	****	****	***************************************		**********	******	***************************************
Docket No.	Ctry	Types	Types Status	Grant Dt	Pat No.	Nxt Tax Dt	Exp Dt	
4469C US C G Case: KOZULLA(RE) 5 (1) Title:MAKING HIGH STRENGTH MELT SPUN	US LA(RE) 5 (; G HIGH STR]	C 1) ENGTH MI		25JA1994 Attorney:MDK POLYOLEFIN FI	5281 Ber	. 7 `		Owner:Hercules Incorporated
4470 Case: PUDNEY Title:ROSIN	US Y(IA), STUJ DISPERSIOI	BBS(BM) N CONTA:	G & WELCH INING CRO	4470 US G 28FE1995 Case: PUDNEY(IA), STUBBS(BM) & WELCH Attorney:IGS Title:ROSIN DISPERSION CONTAINING CROSSLINKED CATI	5393338 S TIONIC RESIN	28AU2002 Business Unit:PCH IN	30DE2012 H	Owner:Hercules Incorporated
4471 Case: DASGUI Title:PROCES	US PTA(SP), G: SS AND APP	INGRICH ARATUS 1	G (BH), MA FOR SIMUL	4471 US G 23AU1994 5341103 Case: DASGUPTA(SP), GINGRICH(BH), MA ALLOINEY:IGS Title:PROCESS AND APPARATUS FOR SIMULTANEOUS GENERATION AND	5341103 S ERATION ANI	23FE2002 Business Unit:PCH O	04JE2012 H	Owner:Hercules Incorporated
4477P US P G Case: BRODSKY(GI), KLOSIEWICZ(DW) Title:TUBELESS TIRE COMPRISING PHE	US KY(GI), KLC ESS TIRE CC	P OSIEWICZ OMPRISIN	G Z (DW) & NG PHENOL	4477P US P G 08MR1994 Case: BRODSKY(GI), KLOSIEWICZ(DW) & Attorney:RVJ Title:TUBELESS TIRE COMPRISING PHENOLIC RESIN-CONT	529259C) 08SE2001 Business Unit:RSN RUBBER	16MY2011 N	Owner:Hercules Incorporated
4483 Case: BALLAN Title:PAPER	US NTINE(JD) { BOARD SIZ]	k TANSLI ING SYST	G EY (AC) 1 FEM INCOR	4483 Case: BALLANTINE(JD) & TANSLEY(AC) 1 Attorney:IGS Title:PAPER BOARD SIZING SYSTEM INCORPORATING THER	5456800 Busine S ERMOSETTING RESIN	10AP2003 Business Unit:PCH 3 RESIN	19JL2013 H	Owner:Hercules Incorporated

	Owner:Hercules Incorporated
24AP2010	SN
05JL2004	Business Unit:RSN
5177163	Δ.
05JA1993	Attorney:JW
ט	OSNER (MJ)
Ω	엉
A 4486D US D G	DAUGHENBAUGH (NE)
3 4486D	E Case:

☐ Case: DAUGHENB	AUGH (NE)	& ROS	NER (MJ)	OSNER(MJ) Attorney: JWP		Business Unit: RSN	Z	Owner:Hercu
Title:METHOD O	F PREPARI	ING LI	GHT-COLO	LIGHT-COLORED TACKIFIER RESINS BASED ON	RESINS BASED	NO		
0								
11	ns	ሲ	ט	07JE1994	5318669	07DE2001	23DE2011	

nit:PCH Owner:Hercules Incorporated		001 22FE2011	nit:TEX Owner:Hercules Incorporated	
Business Unit:PCH	GUM GUM	18 22AU2001	Business Unit:TEX	BONDED
IGS	1) ANIONIC	5288348	MSM	WITH LIGHTLY BONDED
Attorney: IGS	THE LEBURANCEMENT OF PAPER DRY STRENGTH WITH (1) ANIONIC GUM	22FE1994	Attorney: MSM	T NONWOVENS WIT
	R DRY	უ ე		3H LOF
(2	PAPEI	บ	2)	NG HIC
DASGUPTA (SP) 8	G ##tle:ENHANCEMENT OF PAP	SU	Case: MODRAK(JP) 3 (2)	Title:METHOD OF MAKING HIGH LOFT NONWOVENS
1 :əss 42	E Trje:E	ວ <u>ເ</u> N‡ F R /	V Case: M	Title:M

Business Unit:TEX	COMPONENT
Attorney:MDK	FROM CORE/SHEATH B.
Case: KOZULLA(RE) 6 (1-4)	Title:NONWOVEN BONDED FABRIC MADE FROM CORE/SHEATH BICOMPONENT

Owner: Hercules Incorporated

11JL2012

11JA2003

5431994

11JL1995

ט

υ

 $_{\rm US}$

Lase: 34486D Case: Title: Title: Case: Cas

United States Country Date of Report: 13NO2000 Hercules Patents World-wide By

Dt Exp Dt 	0700	:PCH Owner:Hercules Incorporated		30SE2011	:TEX Owner:Hercules Incorporated	16AU2011	:PCH Owner:Hercules Incorporated		30SE2011	:TEX Owner:Hercules Incorporated		26DE2010	TRX Owner-Heronles Incorporated
Nxt Tax Dt	22001	Business Unit:PCH	·	19JA2002	Business Unit:TEX	16FE2002	Business Unit:PCH		02FE2002	Business Unit:TEX		02MY2001	Rusiness IInitoTEX
Pat No.	_	38	WATER-SOLUBLE	5330457	OK CORE ZONES	5338406	SS	ING ANIONIC	5334177		COKE ZONES	5257982	ас
Grant Dt		••		19JL1994	Attorney:MDK LE ADJACENT C	16AU1994	Attorney: IGS	ULP CONTAIN	02AU1994	Attorney: MDK	LE ADJACENT	02NO1993	Attorney. BOR
Types Status	_		Title:REPULPING OF PAPER AND PAPERBOARD USING	<u>ი</u>	Case: COHEN(RR) 2 (1) Title:ABSORBENT PRODUCTS WITH MULTIPLE ADJACENT CORE ZONES	ບ		Title:PAPERMAKING USING UNBLEACHED PULP CONTAINING ANIONIC	MP G	()	IICIE:ABSORBENI FRODUCIS WITH MOLIIPLE ADJACENI CORE	ອ ນ	夏(東江) ク (1)
Ctry	Sn	13 (10)	NG OF PAP	SN	R) 2 (1) IT PRODUC'	ns	3) 3 (1-2)	KING USIN	SN	(5) 3 (1-2)	T PRODUC	SN	LICHENGIA
Docket No.	4499C	Case: ESPY(HH) 13 (10)	Title:REPULPIN	4500C	<pre>Case: COHEN(RR) 2 (1) Title:ABSORBENT PRODU</pre>	4501C	Case: SMITH(DC) 3 (1-2)	Title:PAPERMAK	4514P	Case: COHEN(RR) 3 (1-2)	TITIE: ABSORBEN	4521C	CARP. COHEN (PR) & ENGINE (FLT) 2 (1)

Owner:Hercules Incorporated			Owner:Hercules Incorporated
FI		13MY2014	EX
Business Unit:FFI	MC	13NO2000	Business Unit:TEX
	FRIED FOODS FROM	5629080	
4 dase: CAROSINO(LE) & GERRISH(TC) 3 (Attorney:DE	52 Ttle:METHOD OF PREPARING LOW OIL RETENTION FRIED	7	▼ Case: GUPTA(RK), MALLORY(JE) & TAKEU Attorney:MDK
LSH (T	LOW	ט	JE) &
) & GERR.	REPARING	US P	MALLORY (,
CAROSINO (LE	:METHOD OF P	D	GUPTA (RK),
: B/ 14	4.T 2.5	605 E 187	(ase:

Owner: Hercules Incorporated

03AP2009

Business Unit:AQA

25002003

6054511

25AP2000

Ö

Ä

Owner: Hercules Incorporated

31DE2012

Business Unit:DEV

06JE2002

15AP2014

150C2004

5620727

15AP1997

Ç

Ö

ns

Title:COMPOSITION AND PROCESS FOR THERMOBONDABLE, BICOMPONENT Title: COMPOSITION OF HIGH SOLIDS, LOW VISCOSITY CATIONIC AND Case: ANGERER(JD), MODI(JJ) & SZAFRA Attorney:DE 4551C Case: **10** 4548C

United States Country Date of Report: 13NO2000 Hercules Patents World-wide By

3 -	2
5545481	4557P US P G 13AU1996 554545
DK	Case: HARRINGTON(JH) 5 (4) Attorney:MDK
ED WITH	Title:PROCESS OF MAKING HYDROPHOBIC FIBER TREATED WITH
5324531	4560C US C G 28JE1994 5324531
E	Case: HOEFLER(AC), SLEAP(JA) & TRUDS Attorney:DE
EAT-STABLE	Title:FAT SIMULATING, NONSPHEROIDALLY SHAPED, HEAT-STABLE
5534340	4568 US G 09JL1996 5534340 09.
DK	Case: GUPTA(RK) & LEGARE(RJ) 1 Attorney:MDK Busines
ROPHOBIC P	Title:NONWOVEN FABRIC MADE FROM CARDED FINE HYDROPHOBIC POLYOLEFIN
5407475	4570 G 18AP1995 5407475
E	Case: LUKACH(CA) & ZAPICO(J) 1 Attorney:DE Busin
OSE CONTAI	Title:AQUEOUS SUSPENSION OF HYDROXYETHYL CELLULOSE CONTAINING AT
5554441 DK Bus TWO IMMISCIBLE	

	Owner:Hercules Incorporated
09AU2013	SSN
21AU2002	Business Unit:RSN
5391670	۵
21FE1995	Attorney: JWP
೮	VICZ(DW) 1
ns	(A) & KLOSIEWICZ (DW)
10 4589	4 dese: BISWAS (A)

Owner: Hercules Incorporated

300C2009

Business Unit:AQA

09DE2003

				-	
RSN	31AU2013		06NO2012	LEA	
Business Unit:RSN RATED	28AU2002 Rusiness IInit.TEY		040C2002	business onic:TEA ESTERS	
o OLY-UNSATU	5393812	MPOSITION	5403426	TER-SOLUBLE	
Attorney:JWI KYLATION OF I	28FE1995	POLYOLEFIN CC	04AP1995	POLYOLEFIN FIBER WITH CERTAIN WATER-SOLUBLE ESTERS	
CEWICZ(DW) 1 7 CATALYTIC AI	US GANCHEZ (WI.) 1	LIGHT STABLE	C G	SFIN FIBER WIT	
Gese: BISWAS(A) & KLOSIEWICZ(DW) 1 Attorney:JWP Busine Htle:RESIN OBTAINED BY CATALYTIC ALKYLATION OF POLY-UNSATURATED		ar:	4597C US C G 04AP1995	DIFYING POLYOLE	
818:818 FATE 1425	ERA ERA FRA FRA (CS)	Writle:FLZ	07 4597C	Title: MODIFYING	

Owner: Hercules Incorporated

Owner: Hercules Incorporated

Hercules Patents World-wide By Country - United States Date of Report: 13NO2000

	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated
Nxt Tax Dt Exp Dt	904 04DE2003 13OC2013 Business Unit:DIS STRENGTH	27AU2003 290C2013 Business Unit:AQA R,	28MY2003 28NO2012 Business Unit:TEX HEAVILY	07MY2004 07NO2017 Business Unit:FFI 3D	15AU2003 Business Unit:AQA NIDE IN	.5 11MY2001 11NO2014 Business Unit:PCH AGENT, NOT	11DE2003 02DE2014 Business Unit:PCH [DINIUM	3 02NO2002 05JA2014 Business Unit:TEX FIBERS	26SE2003 26MR2013 Business Unit:PCH (1)
Grant Dt Pat No.	_ ^1	27FE1996 5494509 (AH Attorney:DE OMPRISING PIGMENT, BINDER	28NO1995 5470640 Attorney:MDK Y BONDED FACE WEB(S)	07NO2000 6143346 Attorney:MFS BOVE 60% AND SPECIFIED	15FE2000 6025311 Attorney:DE Bu R-SOLUBLE POLYSACCHARIDE	568581 K SIZING	11JE1996 5525664 Attorney:IGS G BOTH A HYDROXYAZETIDINIUM	02MY1995 5411693 Attorney:MDK OF MULTICOMPONENT FI	26MR1996 5502091 Attorney:IGS COMPOSITION COMPRISING
Types Status Gr	US G 04JE1996 CAIRNS(DS), DANIEL(IM),MORAN(J Attorney:MDK COMPOSITE FEMORAL IMPLANT HAVING INCREASED	G 27 & VAN WAVEREN (AH Att ; COMPOSITION COMPRISI	G WITH LIGHTL	G WITH D.E. A	G 15FE20 YOUNG(T-S) 1 Attorne SUSPENSION OF WATER-SOLUB	US G 11NO19 BOTTORFF(KJ), BRUNGARDT(CL), DUM Attorne FINE PAPER CONTAINING 2-OXETANONE ALKA	US G 11JE1 JER(AJ) & STUBBS(BM) 2 Attorn STRENGTH RESIN INCORPORATING BOTH	G F	
Docket No. Ctry	4608 US G 04JE1996 5522 Case: CAIRNS(DS), DANIEL(IM),MORAN(J Attorney:MDK Title:COMPOSITE FEMORAL IMPLANT HAVING INCREASED NECK	4609 Case: KRUYTHOFF(D) & VAN WAVEREN (AH Attorney:DE Title:PAPER COATING COMPOSITION COMPRISING PIGMENT,	4610D US D Case: MODRAK(JP) 6 (2-3) Title:HIGH LOFT NONWOVENS	4616 US Case: GLAHN(PE) 1 Title:PECTIN COMPOSITIONS	4622 Case: CLARKE(MT) & YOU Title:STABLE FLUID SUS	## 4623 US G 11N01997 ## Case: BOTTORFF(KJ), BRUNGARDT(CL), DUM Attorney:MD: ## Title:FINE PAPER CONTAINING 2-OXETANONE ALKALINE	4629 Gse: MILI Lattle:WET	A ME 39 US VELSE: WUST (CJ) 1 Title:PROCESS FOR HIGH	4641D US D G Case: DASGUPTA(SP) 9 (7-8) Title:PAPER DRY-STRENGTH ENHANCING

United States Country Date of Report: 13NO2000 Hercules Patents World-wide By

******	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated
Date of Report: 13NO2000 3.*********************************	4642P US P G 10SE1996 5554435 10MR2004 31JA2014 Case: GUPTA(RK) & LEGARE(RJ) 3 (2) Attorney:MDK Business Unit:TEX Title:COMPOSITE NONWOVEN PRODUCT COMPRISING LAYER OF MELTBLOWN	4643C US C G 03FE1998 5714552 03AU2001 03FE2015 Case: BOWER(BK) 8 (5-6-7) Attorney: IGS Business Unit: PCH Title: MAKING WATER-SOLUBLE EPICHLOROHYDRIN MODIFIED POLYAMINES AND	4644P US P G 11JE1996 5525738 11DE2003 11JE2013 Case: ZHANG(JJ) 3 (1) Attorney:IGS Business Unit:PCH Title:PREPARING ALKYL KETENE DIMER(S) BY DEHYDROHALOGENATION OF	4652 USGUPTA(SP) & ESPY(HH) 2 Attorney:IGS Business Unit:PCH Title:DRAINAGE AID FOR PAPER MANUFACTURE COMPRISING OLIGOMERIC,	4653 US G 16JA1996 5484952 16JL2003 05MY2014 Case: NOLAN(TF) & STUBBS(BM) 1 Attorney:MDK Business Unit:PCH Title:MAKING ALKYL KETENE DIMER BY DEHYDROHALOGENATION OF	4655C US C G 28MY1996 5521234 28NO2003 28MY2013 Case: BROWN(RG), BURDICK(CL) & VANDE Attorney:DE Business Unit:AQA Title:CONTINUOUS PRODUCTION OF PIGMENTED AQUEOUS LATEX COATING

Owner:Hercules Incorporated	Owner:Hercules Incorporated	Owner:Hercules Incorporated
Business Unit:TEX	23JL2003 29AP2014 Business Unit:TEX BLADES	04MY2001 04NO2014 Business Unit:TEX KING
':MDK 'IN FIBER FOR	23JA1996 5485662 Attorney:MDK ETHOD INCLUDING DOCTOR BLA	5683809 -CUFF, BAC
45 dese: SCHMALZ(AC) 12 (9-11) The Referention of HYDROPHOBICITY IN POLYOLEE	JAMES CRIMPING APPARATUS AND METHOD INCLUDING DOCTOR BLADES	4665 US G 04NO1997 5683809 Case: FREEMAN(WJ), GUPTA(RK), HARRIN Attorney:MDK Title:FILMLESS HYDROPHOBIC BARRIER FABRIC FOR LEG-CUFF, BACKING

30MY2009

24AU2001

5721048

24FE1998

Ö

MC

 Ω S

1 46590