### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3697790

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

### **CONVEYING PARTY DATA**

Name	Execution Date
TPC GROUP LLC	01/15/2016

### **RECEIVING PARTY DATA**

Name:	RIVERSTONE CREDIT PARTNERS, L.P.
Street Address:	712 FIFTH AVENUE, 36TH FLOOR
Internal Address:	ATT: GENERAL COUNSEL
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10019

### **PROPERTY NUMBERS Total: 28**

Property Type	Number
Patent Number:	9115038
Application Number:	14799808
Patent Number:	6562913
Patent Number:	6525149
Patent Number:	7037999
Patent Number:	6992152
Patent Number:	6683138
Patent Number:	6884858
Patent Number:	6858188
Patent Number:	6844401
Patent Number:	6844400
Patent Number:	6777506
Patent Number:	7091285
Patent Number:	7056990
Patent Number:	7645847
Patent Number:	7498396
Patent Number:	7329635
Application Number:	12932837
Patent Number:	8524843

PATENT REEL: 037499 FRAME: 0246

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Property Type	Number
Patent Number:	8496361
Application Number:	14346860
Patent Number:	9074026
Application Number:	14386550
Application Number:	13903497
Application Number:	14771227
Application Number:	14771302
Application Number:	62212620
Application Number:	14324428

### **CORRESPONDENCE DATA**

**Fax Number:** (212)303-7064

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:** 212.318.6824

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Correspondent Name: CHRISTINE DIONNE C/O PAUL HASTINGS LLP

Address Line 1: 75 EAST 55TH STREET

Address Line 4: NEW YORK, NEW YORK 10022

ATTORNEY DOCKET NUMBER:	92490.00003
NAME OF SUBMITTER:	CHRISTINE DIONNE
SIGNATURE:	/CHRISTINE DIONNE/
DATE SIGNED:	01/15/2016

### **Total Attachments: 10**

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#### PATENT AND TRADEMARK SECURITY AGREEMENT

# GRANT OF SECURITY INTEREST IN UNITED STATES TRADEMARKS AND PATENTS

FOR GOOD AND VALUABLE CONSIDERATION, receipt and sufficiency of which are hereby acknowledged, TPC Group LLC, a Texas limited liability company, (the "Grantor"), hereby grants, on this 15th day of January 2016, to Riverstone Credit Partners, L.P., as Collateral Agent, with principal offices at 712 Fifth Avenue, 36th floor, New York, NY, 10019, (the "Grantee"), a security interest in (i) all of the Grantor's right, title and interest in and to the United States trademarks, trademark registrations and trademark applications (the "Marks") set forth on Schedule A attached hereto, (ii) all of the Grantor's right, title and interest in and to the United States patents and pending patent applications (the "Patents") set forth on Schedule B attached hereto, in each case together with (iii) all Proceeds (as such term is defined in the Security Agreement referred to below) of the Marks and Patents.

THIS GRANT is made to secure the full and prompt performance and payment of all the Secured Obligations (as such term is defined in the Security Agreement described herein). Upon the occurrence of the Termination Date (as defined in the Security Agreement) or as otherwise provided in Section 17 of the Security Agreement, the Grantee shall, upon such satisfaction, execute, acknowledge, and deliver to the Grantors an instrument in writing releasing the security interest in and re-assigning the Marks and Patents acquired under this Grant to the Grantor.

This Grant has been granted in conjunction with the security interest granted to the Grantee under the Security Agreement among the Grantor, the other assignors party thereto and the Grantee, dated as of January 15, 2016 (as amended, amended and restated or otherwise modified from time to time, the "Security Agreement"). The rights and remedies of the Grantee with respect to the security interest granted herein are more fully set forth in the Security Agreement. In the event that any provisions of this Grant are deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall govern.

[Signature pages follow]

LEGAL\_US\_E # 101841872.2 001396-0006-15451-Active.18437365.2

IN WITNESS WHEREOF, the undersigned have executed this Grant of Security Interest as of the date first written above.

TPC GROUP LLC,

as Grantor

Name: Miguel A. Desdin

Title: Senior Vice President and Chief Financial

Officer

## RIVERSTONE CREDIT PARTNERS, L.P.,

as Grantee

By: RCP F1 GP, L.P., its general partner

By: RCP F1 GP, L.L.C., its general partner

By:

Name: 18h /15tophe

Title: Managing Director

**REEL: 037499 FRAME: 0250** 

## Schedule A

## U.S. Trademark Registrations

Trademark	Trademark Name	Country	Serial No.	Filing Date	Registration No.	Registration Date	Owner
	P	U.S.	85/042,245	5/19/10	3,996,172	7/19/11	TPC Group LLC
TPC	TPC	US	85/316,712	5/10/11	4,070,662	12/13/11	TPC Group LLC
	TPC Group OXO-D	US	85/460/378				TPC Group LLC

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## Schedule B

## U.S. Issued Patents and Pending Patent Applications

Matter No.	Title	Country	Serial No.	Filing Date	Patent No.	Issue Date	Owner
TPC-10-1	Process for Selective Removal of Acetylenes from Gaseous Streams	U.S.	13/332,985 (61/459,978)	12/21/11 (12/22/10)	9,115,038	8/25/15	TPC Group LLC
TPC-10- 1A	Process for Selective Removal of Acetylenes from Gaseous Streams	U.S.	14/799,808	7/15/15			
TPC-10-3	Process For Producing High Vinylidene Polyisobutylene	U.S.	09/515,790	2/29/00	6,562,913	5/13/03	TPC Group LLC
TPC-10-4	Process For Preparing Polyolefin Products	U.S.	09/665,084 (60/154,263; 60/160,357/ 09/515,790)	9/20/00 (9/1/99; 10/19/99; 2/29/00)	6,525,149	2/25/03	TPC Group LLC
TPC-10-5	Mid-Range Vinylidene Content Polyisobutylene Polymer Product and Process For Producing The Same	U.S.	10/102,279	3/19/02	7,037,999	5/2/06	TPC Group LLC
TPC-10-7	Apparatus and Method for Controlling Olefin Polymerization Process	US	10/922,181	8/19/04	6,992,152	1/31/06	TPC Group LLC
TPC-10-9	Process For Producing High Vinylidene Polyisobutylene	US (cont. of TPC-10- 3)	10/334,639	12/31/02	6,683,138	1/27/04	TPC Group LLC

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Matter No.	Title	Country	Serial No.	Filing Date	Patent No.	Issue Date	Owner
TPC-10-11	Process for Preparing Polyolefin Products	US (cont.of TPC-10- 4)	10/208,234	7/30/02	6,884,858	4/26/05	TPC Group LLC
TPC-10-12	Apparatus for Preparing Polyolefin Products and Methodology for Using the Same	US	10/434,805	5/9/03	6,858,188	2/22/05	TPC Group LLC
TPC-10-13	Apparatus for Preparing Polyolefin Products and Methodology for Using the Same	US	10/758,499	1/15/04	6,844,401	1/18/05	TPC Group LLC
TPC-10-14	Apparatus for Preparing Polyolefin Products and Methodology for Using the Same	US (division of TPC- 10-12)	10/758,168	1/15/04	6,844,400	1/18/05	TPC Group LLC
TPC-10-15	Apparatus for Preparing Polyolefin Products and Methodology for Using the Same	US (division of TPC- 10-12)	10/757,748	1/15/04	6,777,506	8/17/04	TPC Group LLC
TPC-10-17	Adducts of Mid- range Vinylidene Content Polyisobutylene Polymer Products and Methods For Making Same	US	10/896,792	7/22/04	7,091,285	8/15/06	TPC Group LLC

Matter No.	Title	Country	Serial No	Filing Date	Patent No.	Issue Date	Owner
TPC-10-18	Process For Producing Mid- range Vinylidene Content Polyisobutylene Polymer Products	US  (CIP of TPC-10-11 which is a continuat ion of TPC-10-5)	10/968,630	10/19/04	7,056,990	6/6/06	TPC Group LLC
TPC-10-19	Process for Preparing Polyolefin Products	(cont. of TPC-10-11)	10/962,920	10/12/04	7,645,847	1/12/10	TPC Group LLC
TPC-10-20	Mid-range Vinylidene Content Polyisobutylene Polymer Product Produced by Liquid Phase Polymerization Process	US (cont.of TPC-10- 18)	11/281,746	11/17/05	7,498,396	3/3/09	TPC Group LLC
TPC-10-21	Crude oil Composition Including Dispersant Material for Mitigating Fouling of Process Equipment and Method for Mitigating Crude Oil Fouling	US	11/634,668	12/6/06	7,329,635	2/18/08	TPC Group LLC

Matter No.	Title	Country	Serial No.	Filing Date	Patent No.	Issue Date	Owner
TPC-10-22	Polyisobutylene Production Process With Improved Efficiencies and/or for Forming Products Having Improved Characteristics and Polyisobutylene Products Produces Thereby	US	12/932,837	3/8/11			TPC Group LLC
TPC-11-1	Production of Highly Reactive Low Molecular Weight PIB Oligomers	US	13/489,064 (61/520,328)	6/5/12 (6/8/11)	8,524,843	9/13/13	TPC Group LLC

Matter No.	Title	Country	Serial No.	Filing Date	Patent No.	Issue Date	Owner
TPC-11- 5A	Polyisobutylene Prepared at High Velocity and Circulation Rate	US	14/346,367	3/21/14	8,946,361	2/3/15	TPC Group LLC
TPC-11-5B	Mid-Range Vinylidene Content, High Viscosity Polyisobutylene Polymer	US	14/346,860	3/24/14			
	Polyisobutylene Prepared with Low Diluent Content Reaction Medium						
TPC-11-5C		US	14/347,695	3/27/14	9,074,026	7/7/15	
TPC-11-8	Improved Controllability Oxidative Dehydrogenation Process for Producing Butadiene (OXO-D)	US	14/386,550	9/19/14			TPC Group LLC

Matter No.	Title	Country	Serial No.	Filing Date	Patent No.	Issue Date	Owner
TPC-12-3	Adducts of Low Molecular Weight PIB With Low Polydispersity and High Vinylidene Content	US	13/903,497	5/28/13			TPC Group LLC
TPC-13-1	Oxidative Dehydrogenation Process With Hydrocarbon Moderator Gas and Reduced Nitrogen Feed	US	14/771,227	8/28/15			TPC Group LLC
TPC-13-2	Multi-Stage Oxidative Dehyhdrogenatio n Process with Inter-Stage Cooling	US	14/771,302	8/28/15			TPC Group LLC
TPC-13- 2A	High Throughput Oxidative Dehydrogenation Process	US	62/212,620	9/1/15			TPC Group LLC
TPC-13- 4A	Manufacture of Butadiene from Ethylene	US	14/324,428	7/7/14			TPC Group LLC

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**RECORDED: 01/15/2016**