

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | SECURITY AGREEMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| Oxane Materials, Inc. | 03/12/2010 |
| RECEIVING PARTY DATA | |
| Name: | Comerica Bank |
| Street Address: | 39000 Six Mile Road |
| Internal Address: | M/C 7578 |
| City: | Livonia |
| State/Country: | MICHIGAN |
| Postal Code: | 48152 |
| PROPERTY NUMBERS Total: 6 | |
| Property Type | Number |
| Application Number: | 13232040 |
| Application Number: | 13623202 |
| Application Number: | 12548243 |
| Application Number: | 13355606 |
| Application Number: | 13423015 |
| Application Number: | 13009917 |
| CORRESPONDENCE DATA | |
| Fax Number: | 7349302494 |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | |
| Phone: | 734-761-3780 |
| Email: | asujek@bodmanlaw.com |
| Correspondent Name: | Angela Alvarez Sujek - Bodman |
| Address Line 1: | 201 S. Division St., Ste. 400 |
| Address Line 4: | Ann Arbor, MICHIGAN 48104 |
| ATTORNEY DOCKET NUMBER: | OXANE |

OP \$240.00 13232040

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| NAME OF SUBMITTER: | Angela Alvarez Sujek |
| Signature: | /Angela Alvarez Sujek/ |
| Date: | 06/28/2013 |
| Total Attachments: 6 source=Oxane - IP Security Agreement#page1.tif source=Oxane - IP Security Agreement#page2.tif source=Oxane - IP Security Agreement#page3.tif source=Oxane - IP Security Agreement#page4.tif source=Oxane - IP Security Agreement#page5.tif source=Oxane - IP Security Agreement#page6.tif | |

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement is entered into as of March 12, 2010 by and between COMERICA BANK ("Bank") and OXANE MATERIALS, INC., a Delaware corporation ("Grantor").

RECITALS

A. Bank has agreed to make certain advances of money and to extend certain financial accommodation to Grantor (the "Loans") in the amounts and manner set forth in that certain Loan and Security Agreement by and between Bank and Grantor dated of even date herewith (as the same may be amended, modified or supplemented from time to time, the "Loan Agreement"). Capitalized terms used herein are used as defined in the Loan Agreement.

B. Bank is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Bank a security interest in certain Copyrights, Trademarks and Patents to secure the obligations of Grantor under the Loan Agreement.

C. Pursuant to the terms of the Loan Agreement, Grantor has granted to Bank a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Loan Agreement and all other agreements now existing or hereafter arising between Grantor and Bank, Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

To secure its obligations under the Loan Agreement and under any other agreement now existing or hereafter arising between Bank and Grantor, Grantor grants and pledges to Bank a security interest in all of Grantor's right, title and interest in, to and under its Intellectual Property Collateral (including without limitation those Copyrights, Patents and Trademarks listed on Exhibits A, B and C hereto), and including without limitation all proceeds thereof (such as, by way of example but not by way of limitation, license royalties and proceeds of infringement suits), the right to sue for past, present and future infringements, all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof.

This security interest is granted in conjunction with the security interest granted to Bank under the Loan Agreement. The rights and remedies of Bank with respect to the security interest granted hereby are in addition to those set forth in the Loan Agreement and the other Loan Documents, and those which are now or hereafter available to Bank as a matter of law or equity. Each right, power and remedy of Bank provided for herein or in the Loan Agreement or any of the Loan Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by Bank of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Loan Agreement or any of the other Loan Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any person, including Bank, of any or all other rights, powers or remedies.

Grantor represents and warrants that Exhibits A, B, and C attached hereto set forth any and all intellectual property rights in connection with which Grantor has registered or filed an application with either the United States Patent and Trademark Office or the United States Copyright Office, as applicable.

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

Address of Grantor:

467 West 38th Street
Pine Forest Building #21
Houston, Texas 77018
Attn: Greg Williams

Address of Bank:

39000 Six Mile Road
M/C 7578
Livonia, Michigan 48152
Attn: National Documentation Services

GRANTOR:

OXANE MATERIALS, INC.

By: Christopher E. Cohn
Title: President

BANK:

COMERICA BANK

By: Atty of OPC
Title: Vice President

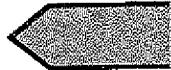


EXHIBIT A

Copyrights

None.

EXHIBIT B**Patents**

| Title | App. No. | Filing Date | Reg. No. | Date Granted |
|--|-----------|-------------|-----------|--------------|
| Composition and method for making a proppant | 11/769247 | 6/27/07 | 7,867,613 | 1/11/11 |
| Proppants with carbide and /or nitride phases | 13/232040 | 9/14/11 | 8,178,477 | 5/15/12 |
| Composition and method for making a proppant | 12/252581 | 10/16/08 | 7,914,892 | 3/29/11 |
| Composition and method for making a proppant | 12/252708 | 10/16/08 | 7,887,918 | 2/15/11 |
| Composition and method for making a proppant | 12/252682 | 10/16/08 | 7,883,773 | 2/8/11 |
| Method to remove sulfur or sulfur-containing species from a source | 11/801244 | 5/9/07 | 7,569,199 | 8/4/09 |
| Composition and method for making a proppant | 11/498527 | 8/3/06 | 7,491,444 | 2/17/09 |
| Composition and method for making a proppant | 11/347664 | 2/3/06 | 7,459,209 | 12/2/08 |
| Ceramic particles with controlled pore and/or microsphere placement and/or size and method of making same | 12/977302 | 12/23/10 | n/a | n/a |
| Proppant having a glass-ceramic material | 12/967784 | 12/14/10 | 8,178,476 | 5/15/12 |
| Cordierite having an increased alpha-Cordierite phase and a proppant containing the same | 12/951347 | 11/22/10 | n/a | n/a |
| Composition and method for making a proppant | 12/961629 | 12/7/10 | 8,075,997 | 12/13/11 |
| Method of manufacture and the use of a functional proppant for determination of subterranean fracture geometries | 12/468088 | 5/19/09 | 8,168,570 | 5/1/12 |
| Composition and method for making a proppant | 12/360218 | 1/27/09 | n/a | n/a |
| Proppants with carbide and/or nitride phases | 12/176029 | 7/18/08 | 8,047,288 | 11/1/11 |
| Composition and method for making a proppant | 12/252653 | 10/16/08 | 8,003,212 | 8/23/11 |
| Composition and method for making a proppant | 11/728953 | 3/27/07 | 8,012,533 | 9/6/11 |
| Self-toughened high-strength proppant and methods of making same | 13/009917 | 1/20/11 | n/a | n/a |
| Ceramic particles with controlled pore and/or microsphere placement and/or size and method of making same | 12/977302 | 12/23/10 | n/a | n/a |
| Proppant having a glass-ceramic material | 12/967784 | 12/14/10 | n/a | n/a |
| Cordierite having an increased alpha-Cordierite phase and a proppant containing the same | 12/951347 | 11/22/10 | n/a | n/a |

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| Composition and method for making a proppant | 12/961629 | 12/7/10 | n/a | n/a |
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EXHIBIT C

Trademarks

| Mark | App. No. | Filing Date | Reg. No. | Reg. Date |
|----------------------------------|-----------|-------------|-----------|-----------|
| ADVANCED CERAMIC PROPPANTS | 85/606055 | 4/24/12 | n/a | n/a |
| OXFRAC | 85/587666 | 4/3/12 | n/a | n/a |
| WOLFBALL | 85/567986 | 3/13/12 | n/a | n/a |
| OXSENSE | 85/489081 | 12/7/11 | n/a | n/a |
| UNLOCK THE ROCK | 85/313335 | 5/5/11 | n/a | n/a |
| LENGTH MATTERS | 77/968898 | 3/25/10 | n/a | n/a |
| OXTAG | 77/968913 | 3/25/10 | n/a | n/a |
| ATLAS | 77/965221 | 3/22/10 | n/a | n/a |
| HERCULES | 77/965020 | 3/22/10 | n/a | n/a |
| OX | 77/965135 | 3/22/10 | n/a | n/a |
| CERAMIC REBAR | 77/965180 | 3/22/10 | n/a | n/a |
| OXSTEEL | 77/965193 | 3/22/10 | n/a | n/a |
| OXBALL | 77/612986 | 11/12/08 | 4,084,234 | 1/10/12 |
| NANOSTRUCTURED INNOVATIONS | 77/479485 | 5/20/08 | 4,096,476 | 2/7/12 |
| OXANE MATERIALS | 77/409072 | 2/28/08 | 4,067,445 | 12/6/11 |
| MORE OIL, MORE GAS, MORE QUICKLY | 77/409053 | 2/28/08 | 4,063,636 | 11/29/11 |
| OXANE (Stylized letters) | 77/409093 | 2/28/08 | 4,067,446 | 12/6/11 |
| OXTHOR | 85/931186 | 5/14/13 | n/a | n/a |