IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

Xene Corp.,

Plaintiff,

v.

Nouryon B.V.(f/k/a Akzo Nobel), NOURYON USA, LLC, Akzo Nobel Inc., Akzo Nobel Chemicals Inc., Nouryon Pulp and Performance Chemicals AB , Nouryon Salt LLC New Jersey, Nouryon US Holding 1 Inc., Nouryon US Holding 2 Inc., Nouryon US Holding 4 Inc., Wilmington, Nouryon USA LLC U.S.A., Nouryon Pulp and Performance Chemicals LLC, Diadem Sports, Lantor Composites AB, and JOHN DOES #1 to #1003, the name of the persons or entities being unknown but the persons or entities being those persons or entities who have purchased microspheres from defendants for composites.

Defendants.

No. CV 22-2850

COMPLAINT
PATENT
INFRINGEMENT

JURY TRIAL DEMANDED

CHEN, J.

HENRY, M.J.

COMPLAINT FOR BREACH OF CONTRACT AND PATENT INFRINGEMENT

Plaintiff, Xene Corporation ("Plaintiff" or "Xene"), by its undersigned attorneys brings this Patent Infringement action against Defendant Nouryon BV and its wholly owned subsidiaries ("Nouryon" or "Defendants"), and hereby alleges as follows:

NATURE OF THE ACTION

1. An action for infringement of United States Patent Nos. 10,500,447 ("the '447 patent") and 8,238,666 ("the '666 patent") (together "the Patents" or "the Asserted Patents") under the Patent Laws of the United States, 35 U.S.C. § 100 *et seq.*, including § 271, arising from Nouryon's unauthorized development, manufacturing, importation, commercial marketing, distribution, offers for sale, sales and/or use of thermoplastic microspheres ("Masterbatch" or "microcapsules") and/or Microspheres.

THE PARTIES

2. Plaintiff, Xene is a New York corporation, having a registered address at 225 Post Ave, Westbury New York 11590.

3. Xene Corporation is the owner of all rights, including the right to enforcement, of the Patents.

4. Xene Corporation is in the business of, *inter alia*, developing composite products, including products containing microcapsules.

5. On information and belief, defendant Nouryon BV (formerly known as Akzo Nobel) is a conglomerate organization [i] with headquarters at Haaksbergweg 88-1101 BZ Amsterdam, the Netherlands, and has wholly owned subsidiaries worldwide. See Schedule A.

6. On information and belief, Nouryon Pulp and Performance Chemicals AB is the microsphere manufacturing company under the laws of Sweden and is located at Stockvikagen 20, SE-854 67, Sunduvall, Sweden, Sunduvall, Sweden.

7. On information and belief, Akzo Nobel Chemicals Inc is a New York

corporation with offices at 1 Livingstone Avenue, Dobbs Ferry NY 10522.

8. Akzo Nobel Inc. is a corporation with offices at 120 White Plains Rd, Tarrytown,NY 10591.

9. On information and believe Diadem Sports in a Florida company located at 200 Park Central Blvd South, Pompano, FL, 33064, and represents numerous JOHN JOEs, similarly situated.

10. Upon information and belief, Lantor BV is a corporation organized and existing under the laws of the Netherlands, with a principal place of business at Verlaat 22, 3901 RG Veenendaal, Netherlands. Lantor is a manufacturer of composites using Expancel microspheres, and represents numerous JOHN JOEs, similarly situated.

11. RTP Imagineering Plastics ("RTP") is a 580 E. Front Street, PO Box 5439, Winona, MN 55987-0439, manufactures a resin and fiber plastic composite using Masterbatch microspheres and a long fiber thermoplastic (LFT) product line and represents numerous JOHN DOEs, similarly situated.

12. Upon information and belief, Nouryon is a chemical company in the business of, among other activities, developing, manufacturing, and/or commercializing chemical products containing microspheres (microcapsules or MASTERBATCH) used for manufacturing composites products disclosed in the Patents.

13. Upon information and belief, Nouryon developed Microspheres, and commercially manufactures, distributes, markets, offers for sale and/or sells it under the name Expancel® and Masterbatch outside of the United States. Nouryon induced Lantor, Diadem,and RTP and all smiliar John Does to produce composite products in violation of The Patents..

14. Upon further information and belief, Expancel® is known as Microspheres (microcapsules) in the United States.

15. Upon information and belief, Masterbatch contains the same or substantially identical MASTERBATCH, known as thermoplastic microspheres by a volume of 65% with the remainder of 35% containing resins.

16. Upon information and belief, Nouryon manufactures the MASTERBATCH contained in RTP, Lantor Composites and Diadem sporting goods.

17. Upon information and belief, the RTP, Lantor Composites AB ("Lantor") and Diadem and all JOHN DOES similarly situated, produce products and are manufactured using the same or substantially identical processes as those claimed in the Asserted Worldwide patents.

18. Upon information and belief, the thermoplastic product Expancel® and Masterbatch are the same or substantially identical to Microspheres in the Asserted Worldwide patents.

19. Upon information and belief, Nouryon manufactures thermoplastic Masterbatch and/or Microspheres outside of the United States, *e.g.*, in Sweden.

20. Upon further information and belief, Nouryon USA LLC imports thermoplastic and/or Microspheres into the United States and Diadem, RTP and Lantor import composite products made of Nouryon's microspheres into the United States.

21. Upon further information and belief, Nouryon AB sells Microspheres to Lantor, Diadem and RTP and all John Does similarly situated for manufacture of composites products to residents throughout the United States, including in this district.

22. Upon information and belief, Lantor BV is a corporation organized and existing under the laws of the Netherlands, with a principal place of business at Verlaat 22, 3901 RG Veenendaal, Netherlands.

23. Upon information and belief, Lantor, Diadem and RTP and all smiliar John Does are Composites company in the business of, among other activities, making, manufacturing, and/or commercializing composites products made with Nouyron's Expancel microspheres.

24. Upon information and belief, Lantor, Diadem,and RTP and all similar John Does purchase Microspheres from Nouryon/Akzo Nobel and Nouryon/Akzo Nobel and induce them to use their microspheres in violation of the patents and are therefore indirect infringers.

25. Upon information and belief, Lantor, Diadem and RTP and all smiliar John Does purchase Masterbatch and/or Microspheres from Nouryon and use them to make composites products and then import and sell them in the United States.

26. Upon further information and belief, Lantor, Diadem and RTP and all smiliar John Does commercially market, offer for sale, and/or sell Composites with Microspheres to residents throughout the United States, including in this District.

JURISDICTION AND VENUE

27. This is an action, *inter alia*, for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 100 *et seq.*, including §§ 271 and § 154(d) providing provisional protection from the publication of the application

28. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331, 1332 and 1338(a).

29. Upon information and belief, this Court has personal jurisdiction over Nouryon, and its subsidiaries under New York's Long Arm Statute, New York C.P.L.R. § 302, because Nouryon, through partnership with Lantor, RTP and Diadem and all similar John Does who collectively commercially market, distribute, offer for sale and sell Microspheres and Masterbatch to residents throughout the United States, including in New York. Upon further information and belief, Nouryon, Lantor, Diadem, and RTP and all smiliar John Does, regularly do business in New York, derive substantial revenue from goods used or consumed in New York, and expect or should reasonably expect their acts to have consequences in New York. Upon further information and belief, Nouryon has established, and will continue to maintain, minimum contacts with this forum such that the exercise of jurisdiction over Nouryon would not offend traditional notions of fair play and substantial justice.

30. Venue is proper in this Judicial District under the agreements with Nouryon and as to Defendants under 28 U.S.C. § 1400(b) because Nouryon has committed

acts of infringement and has a regular and established place of business in this Judicial District.

31. Upon further information and belief, venue is proper in this judicial district as to Nouryon, 28 U.S.C. §§ 1391 and 1400(b) for at least the reason that Nouryon is a foreign corporation not residing in any United States district and may be sued in any judicial district that has personal jurisdiction, including this judicial district.

FACTUAL BACKGROUND

Microcapsules in Composites

32. The manufacturing process described in the '447 patent describes ,"making a fiber composite member comprising: (1) (a) forming flat members of fiber permeated with **resinous_material;** (b) wrapping said flat members to form a **tubular member** portion. said tubular member portion having first and second ends; (c) effecting placement of a foam plastic forming material, said foam plastic forming material comprising **capsules filled with heat expandable material.** said foam plastic forming material being positioned within the tubular member portion form by said wrapped flat members; (d) substantially closing the ends of the tubular member portion comprising said wrapped flat members to define a substantially **closed bladder;** (e) introducing said closed bladder into a **mold**; (f) **heating** said tubular member portion containing said foam plastic forming material to cause said foam plastic forming material to expand and form a foam plastic and apply **pressure** sufficient to form a fiber composite member; and (g) hardening said resinous material to form said **fiber composite** member." (Emphasis supplied).

33. A "composite" is defined by Wikipedia as " a material which is produced from two or more constituent materials."

34. In sum, the Patent describes the use of microspheres to manufacture composites.

35. Composites manufacturing is an important field of materials manufacturing because of the high strength to weight ratio in making products in the aviation, automobile, transportation, and marine industries, among other things.

36. Conventional methods of composites manufacturing without microspheres are severely limited in performance, weight and strength, volume and require excessive costs to implement. Microspheres create and enhance all these elements of a composite material.

37. After Plaintiff filed applications worldwide in 2010 under the Patent Cooperation Treaty in 2010, Plaintiff approached Defendants' predecessor Akzo Nobel to form a joint venture business for the purpose of marketing and selling microspheres to the composites industry which was so formed by virtue of agreements between them commencing in 2014.

38. Under the Agreements, which ran the life of the Patent, Plaintiff was to support the marketing and sales of microspheres for composites for all of defendants' sales offices around the world, create and distribute marketing and sales materials and brochure and samples and otherwise teach Defendants how to use microspheres for composites manufacturing in consideration for sharing business and profits from the business that was procured in the composites industry, because again without the use of microcapsules, many composites products cannot be made or enabled and many objects cannot be created with the same cost, volume, strength and weight.

39. Under the Agreements, Defendants agreed not to sell unauthorized products to the industries covered by PCT/US2010/038664 and otherwise not to expropriate Xene's proprietary practice by as described in the PCT application.

40. Plaintiff provided all the services to 15 sales offices around the world to support Composites exhibitions worldwide. Plaintiff taught Defendants trade secrets of how to market microspheres to the composite manufacturers' industries for the purpose of jointly benefitting or sharing profits from the venture. Defendants did in fact jointly market using all the materials supported by plaintiff and attended Composites trade shows worldwide consistently and repeatedly and procured hundreds if not thousands of composites clients worldwide and has sold microspheres to these composite companies continuously since the joint venture was started and continuously sold into the domain covered by PCT/US2010/038664 by knowingly selling microspheres to the composites industry, inducing or indirectly causing others to violate the terms of the PCT application in breach of the agreements..

41. Although the Agreements provided for Plaintiff to share in the profits from the business, Plaintiff has not received any renumeration from the sales in the composites market despite the fact that Defendants have earned billions of dollars in profit from the composites industry covered by the scope of PCT/US2010/038664.

42. Plaintiff was completely cut out by Defendants from the business of any business or profit in the composites market yet Defendants continue to sell microspheres in the billions of dollars into the composites industry every year with an exorbitant profit in the billions of dollars.

43. The scope of the business was defined in the Agreements as patent application PCT/US2010/038664 which described as any "resin and fiber composite" using microspheres and the business is in the billions of dollars every year.

44. PCT/US2010/038664 were granted into the following patents worldwide in over 30 countries including Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Monaco, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom, Turkey, Iceland, Poland, Japan, Korea, China and Mexico. Some of the patent numbers are EP2454090, JP5964748, JP6403721, KR101826596, CN102612427A and MX/2015/004235.

The Issued Patents

USA and Europe

45. On December 10, 2019, the United States Patent and Trademark Office ("USPTO") duly and legally issued U.S. Patent No. 10,500,447 ("the '447 patent") entitled "Fiber Composite and Process of Manufacture," to Plaintiff. Xene is the owner of the '447 patent and holds all rights, title and interest in that patent.

46. On December 11, 2012, the USPTO legally issued U.S. Patent No. 8,328,666 ("the '666"), entitled "Fiber Composite and Process of Manufacture" to Plaintiff. Xene is the owner by assignment of the '666 patent and holds all rights, title and interest in that patent.

47. Xene is owner of all title, right and interest in the Issued Patents and has the right to enforce them. The '447, and '666 Patents, entitled "Fiber Composite and Process of Manufacture," were duly and legally issued on December 10, 2019, December 11, 2012 respectively. The PCT, or Issued Patents issued from, which is the national stage entry of PCT/US2010/038664, filed in 2010. The Patents are presumed valid.

48. Xene's PCT/US2010/038664 issued as the '447 patent on December 12, 2019. Accordingly, Nouryon was aware of Xene's PCT/US2010/038664 application at least as of 2011 because of many communications with Xene, and was further aware of the '664 Application prior to issuance of the '447 and became aware of the '447 patent on or shortly after their date of issuance.

49. The '447 and '666 patents describe, *inter alia*, a method of using microcapsules for composites manufacturing. For example, the '447 and '666 patents claim a method of making a product and claim a product containing composite product using microcapsules, respectively.

50. The composite products manufactured according to the processes described in the '447 and '666 patents are characterized by processes using resin and fibers.

51. The '666 patent claim 1, describes: "A resin and ***fiber composite racket comprising a first tubular member*** which extends around the head of the racquet and a **second tubular member** which extends from the base of the handle of the racquet, around the head of the racquet and back to the base of the handle of the racquet, each of said tubular members comprising: 1. A resin and fiber composite layup for making a **resin and fiber composite member** comprising: (a) an outer shell defining a cavity, said outer shell comprising: (i) a plurality of **layers of fibers**; (ii) a first **resinous** material disposed between said fibers and securing said fibers to each other; characterized in that (b) a second resinous material consisting of **spheres** filled with foaming agent disposed inside said cavity; and (c) said spheres of said second resinous material **encapsulate a foaming** agent having an expansion ratio greater than 30. (d) said outer shell defining a cavity forms a ***tubular member*** having first and second end portions, said first and second end portions being configured to seal the inside of said

tubular member." (Emphasis supplied).

52. Elements A-G appearing in the '447 patent and A-E of the '666 and patents also appear in the literature promoted by Akzo Nobel in Exhibition brochures and Lantor composites and RTP product catalogs and the '666 elements are found in Diadem product brochure.

53. Page 3 of the Akzo Brochure "The Molding Process," ("the Akzo Brochure"), describes "[t]he molding process is as simple as laying up composite sheets and resin as per normal processes" (describing elements A and B) and "filling the void with specially formulated microcapsules" (describing C and D), "expands during a chemical reaction during the curing phase""(describing F and G). "This eliminates the need for an air bladder." In the next paragraph, the Akzo Brochure describes "[w]hen heated the internal pressure from the gas increases and the thermoplastic shell softens, resulting in a dramatic increase of the volume of the microspheres (describing E)

54. Page 2 of Lantor Composite's brochure ("the Lantor Brochure"), begins "with our unique **microsphere** technology" (Element IC), and it clearly shows a picture of microspheres for "solutions for **Fiber** reinforced products." (Emphasis supplied) (Element 1A)

55. Page one of Lantor Composite's Sonic SF Brochure ("the Lantor Sonic Brochure"), states that they have "[t]he cost effective solution for closed mold processes (Element 1D) " Is used as core material and infusion medium "a **pressure** stable polyester nonwoven (fiber)" compatible with "all regular types of **resins**" And "suitable for **closed mold** processes," (Element (1E)). (Emphasis supplied).

56. Masterbatch's sole purpose and market is the **closed mold** products using **resins** and **fibers ,** FRP, fiber reinforced plastics composites with: **1.resin, and fiber, 2 in a closed mold which defines an outer shell, 3 a plurality fibers, 4 with microspheres, 5 in a sealed closed cavity**. (Emphasis supplied).

57. Lantor themselves use the technology to make numerous fiber resinated products "Marine: hulls, decks and structures of boats and yachts Transportation: parts and panels of cars,

trailers, trucks and RV's, Mass transit: interior and exterior of trains, light rail and buses, kayaks, surfboards, pools and tubs; cladding panels, fans, containers and tanks; Wind Energy nacelle covers and spinners."

58. RTP's web brochure describes a **resin** and **fiber** plastic composite using **Masterbatch** microspheres and a Long fiber thermoplastic (LFT) product line for automotive industry. (Emphasis supplied). Many other companies follow similar marketing and advertising of masterbatch product describing hundreds of end products. *Id.*

59. On information and belief, the gross profit in microspheres are an exorbitant percentage of the sales price.

60. On information and belief, the worldwide sales of microspheres and Masterbatch for composites manufacturing was in the billions USD per year. This has been occurring for 12 years since the patent application was published.

61. On Nouryon/Akzo's Inducement, it "marketed the use of microspheres to Landor and Diadem and RTP and other John Does upon which these applications were made.

62. Upon information and belief, Diadem's product is also using Expancel microspheres and includes all the steps of using thermoplastic microspheres to mold a product exactly of the type described in the '447, '666 and patents. Diadem is distributing a tennis racket which is made of two or more **tubular members**, each of which are made of multiple **layers of carbon fiber**, (i), which must be bonded together by a **resin** (ii), with a gaseous foam core material which is "dense" and "lightweight" which is a result of pressure in excess of 30 pounds per square inch.

63. Upon information and belief, Akzo/Nouryon continued to market their microspheres into the composites domain for years. Plaintiff is entitled to damages for that period of the application under 35 USC 154(d) and in breach of their agreement, and in breach of other international laws which provides provisional damages as defendant's profits from the period from

the first date of publication in 2010 to the present day.

RTP, Lantor and Diedem's Products are Manufactured Using Infringing Processes

64. Upon information and belief, Xene entered into agreements with Akzo Nobel for the joint marketing of Microspheres for the composites markets. Upon information and belief, Akzo Nobel changed its name to Nouryon, effective January 2, 2017.

65. "Provisional rights allow an inventor to recover royalties for infringing conduct occurring during the period after publication of a patent application but prior to the patent's issuance." See *Baseball Quick, LLC v. MLB Advanced Media L.P.*, 11-CV-1735, 2014 WL 3728623, at *11 (S.D.N.Y. July 25, 2014) (Forrest, J.) (internal quotation marks and citation omitted). 35 U.S.C. § 154(d) provides in pertinent part that "a patent shall include the right to obtain a reasonable royalty from any person who, during the period beginning on the date of publication of the application for such patent ... and ending on the date the patent is issued — ... had actual notice of the published patent application[.]" 35 U.S.C. § 154(d)(1) & (d)(1)(B).

66. Similar provisional rights apply in Europe and were infringed for a period of 12 years with 99% of the gross sales figure representing gross profits of Defendants, and were infringed knowingly and willfully.

67. The inventions as claimed in the patents are substantially identical to the invention as claimed in the published patent application. Akzo Nobel/Nouryon had actual knowledge of the application during the period of joint marketing. Under 35 U.S.C. § 154(d): actual notice and substantial identity. Plaintiff is entitled to damages for the sales during the application period and a reasonable royalty award.

68. Upon information and belief, Nouryon is the manufacturer of the MASTERBATCH (containing thermoplastic Microspheres or microcapsules) made for the composites industries.

69. Upon information and belief, Master Batch (MB for the MASTERBATCH's sole use is the manufacturing of composites.

70. Upon information and belief, the Composites Products contained in RTP,

Lantor's and other Diadem's (and similar John Doe's) Composites products are made in accordance with claims of the Issued Patents using thermoplastic microspheres.

71. Upon information and belief, Nouryon is the maker of Thermoplastic microspheres for MasterBatch..

72. Upon information and belief, "MASTERBATCH" is an internal Nouryon code for the thermoplastic microspheres used for composites manufacturing.

73. Upon information and belief, the end products of RTP, Lantor and Diedem and all those similar John Does manufacture products which meet every limitation of at least one claim of the PCT '664 application and the Issued Patents.

74. Upon information and belief, the (Microsphere) in Masterbatch, is manufactured outside of the United States by or on behalf of Nouryon.

75. Upon information and belief, the thermoplastic MASTERBATCH is imported into the United States by or on behalf of Nouryon and Lantor Composites and RTP.

76. Upon information and belief, MASTERBATCH is imported into the United States.

77. Upon information and belief, MASTERBATCH and Expancel microspheres are imported into the United States by or on behalf of Nouryon and Lantor Composites and RTP and similar John Does.

78. Upon information and belief, once the Microspheres and Masterbatch product is imported into the United States by or on behalf of Nouryon, it is commercially marketed, distributed, used, offered for sale, and/or sold by Lantor Composites, and RTP and similar John Does pursuant to a license from Nouryon throughout the United States.

79. Upon further information and belief, Lantor commercially markets, distributes, offers for sale, sells, and/or uses the Masterbatch and Expancel Microspheres product throughout the United States in the same form in which it is manufactured by Nouryon.

80. Upon information and belief, Nouryon and Lantor Composites directly or indirectly use Microspheres using a process or product which infringes one

or more claims of the Patents, and the product is not materially changed by any subsequent processes and does not become a trivial and nonessential component of another product. Rather, Microspheres is imported and commercially marketed, distributed, offered for sale, sold and/or used, in the United States in the same or substantially the same form in which it is produced using a manufacturing process which infringes the claims of the Patents.

81. Upon information and belief, microspheres are an essential component of the RTP, Lantor Composites and Diadem's products line, and those similar John Does.

82. Upon information and belief, RTP, Diadem, Lantor Composites and all John Does commercially market, distribute, offer for sale, sell, and/or use Microspheres, in this judicial district and throughout the United States.

83. Upon information and belief, the Xenecore Patents for which Xene Corp is the assignee, each recite purported manufacturing methods and products.

84. Upon information and belief, Nouryon's Thermoplastic Master Batch (MB) for thermoplastic are exclusively used for composites molding.

85. Upon information and belief, the Lantor, Diadem and RTP, and all similar John Does, produce and commercialize outside of the United States, and the product commercialized inside of the United States are the same, or substantially the same product, and are manufactured using the same or substantially the same process..

86. Upon information and belief, the thermoplastic in Microspheres contained in Masterbatch are contained in the Lantor, Diadem,and RTP and all smiliar John Does products (*See, e.g.*, Nouryon's Inducement).

87. Upon information and belief, in preparing Masterbatch, microcapsules are added to react with the activated EVA to form an microcapsules activated EVA resin called Masterbatch

88. Upon information and belief, if Lantor, Diadem, and RTP, and all smiliar John Does, did not use Xene's patented process, they would be unable to produce the product having the attributes they have.

89. Upon information and belief, Nouryon induced Lantor, Diadem,and

RTP and all smiliar John Does to use a manufacturing process which infringes the claims of the '447 Patent.

90. Plaintiff Xene has made substantial and reasonable efforts to determine the product and proocess used in the production of Lantor, Diadem and RTP and all similar John Does products. All available information, including publicly available information and Microspheres Reverse Engineering Studies, indicate that Composites are manufactured using a process which infringes the claims of the '447 Patent and/or '666 or '090 patents.

91. Nouryon had knowledge of the Patents prior to their infringement.

92. Upon information and belief, Nouryon's infringement of the Issued Patent was and continues to be deliberate, intentional, and willful.

93. Upon information and belief, Nouryon's actions evidence that Nouryon's and/or Lantor, RTP and Diadems's and similar John Doe's infringement of the Issued Patent is knowing and willful.

COUNT 1

Infringement of the U.S. Patents

94. Plaintiff repeats and re-alleges each previous paragraph as if set forth herein in their entirety.

95. One or more of the following entities of Nouryon has infringed and continues to infringe one or more claims of the Patents, including but not limited to exemplary claims 1, pursuant to 35 U.S.C. § 271 by inducing others such as Lantor, Diadem and RTP and all similar John Does who pursuant to 35 U.S.C. § 271(g) without authority, are importing into the United States, offering to sell, selling, and/or using within the United States the Microspheres product, which is made by a process claimed in the Patents—Akzo Nobel Inc., Nouryon Salt LLC New Jersey, Nouryon US Holding 1 Inc., Nouryon US Holding 2 Inc., Nouryon US Holding 4 Inc., Wilmington, Nouryon USA LLC U.S.A., Nouryon Chemicals LLC, Nouryon Pulp and Performance Chemicals LLC,

96. For example, Lantor, Diadem and RTP and all similar John Does import composites products using thermoplastic and/or the Microspheres product into the United States, which is made by a manufacturing process or are products which infringes the claims of the Patents, and through a licensing arrangement with Lantor, the Microspheres product is commercially marketed, distributed, offered for sale, sold, and/or used throughout the United States.

97. Nouryon has infringed since the publication of the patent application under 154(d) Providing Provisional Protection from the publication of the application, as the published application is substantially identical to the issued patent. The infringement was wonton and willful which would entitle Plaintiff to treble or exemplary damages and well as Defendants' 99% profits.

98. On information and belief, the Fiber reinforced plastics, and composites and Tennis racket products are manufactured by a process covered by one or more claims of the PCT and/or Issued Patents.

99. On information and belief, after the composite products made by Diadem, RTP and Lantor are manufactured by a process covered by the claims of the Patents they is not materially changed by subsequent processes and do not become a trivial and nonessential component of another product.

100. On information and belief, Nouryon has actual knowledge of the Patents.

101. On information and belief, Nouryon was aware of the Patents when they were issued by the Patent Office.

102. On information and belief, Nouryon has acted with full knowledge of the Patents and without a reasonable basis for believing that it would not be liable for infringement of the Patents.

103. On information and belief, Nouryon's infringement of the Patents has been and continues to be intentional and willful.

104. On information and belief, under 35 U.S.C. § 295, Plaintiff is entitled to a

presumption that RTP, Lantor's and Diadem's manufacturing of the composite products with thermoplastic in Microspheres uses a process which infringes the Patents.

105. Nouryon's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiff. Plaintiff will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this court, as a remedy at law alone would be inadequate.

106. Plaintiff is entitled to injunctive relief and damages in accordance with 35 U.S.C.§ 154, 271, 281, 283 and 284 or by virtue of any other reciprocal treaties or contracts between nations of the Patents.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands that the Court enter judgment for Plaintiff against Defendants as follows:

A. Judgment that Nouryon and Defendants infringe one or more of the Issued U.S. Patents under 35 U.S.C. § 271 *et seq.*;

B. A permanent injunction restraining and enjoining Nouryon, and Defendants, and their officers, agents, servants, and employees, and those persons in active concert or participation with of them, and their successors and assigns, from commercially manufacturing, marketing, distributing, using, offering to sell, or selling Microspheres within the United States, or importing Microspheres into the United States, prior to the expiration of the '447 and '666 patents;

C. A permanent injunction restraining and enjoining Nouryon and Defendants, and their officers, agents, servants, and employees, and those persons in active concert or participation with of them, and their successors and assigns, from commercially manufacturing, marketing, distributing, using, offering to sell, or selling Microspheres to the composites industry in breach of the agreement.

D. That Plaintiff be awarded damages adequate to compensate it for Nouryon's and Defendants' past, present, and/or infringements damages being no less than Six Billion Three

Hundred Million US Dollars ($6,300,000,000), together with any pre-judgment and post-judgment interest as allowed by law, costs, and other damages permitted by 35 U.S.C. § 284 and § 284 by virtue of any other reciprocal treaties or contracts between nations of the Asserts Patents;

E. A judgment finding that Nouryon's Patent infringement was deliberate and willful, and an award of treble damages to Plaintiff pursuant to 35 U.S.C. § 284 by virtue of any other reciprocal treaties or contracts between nations of the PCT countries, and exemplary punitive willful treble damages in the amount of Eighteen Billion Nine hundred Million US Dollars ($18,900,000,000).

F. A declaration that this is an exceptional case and an award of attorneys' fees pursuant to 35 U.S.C. § 285;

G. An award of costs and expenses in this action; and

H. Such other and further relief as the Court may deem just and proper

Date: May 16, 2022

/s/Jerry Choe

Jerry Choe
Attorney at Law
5 E 22nd st
New York NY 10010
Tel. (917) 880-5888
jerrychoeesq@gmail.com

Attorney for Plaintiff
Xene Corporation

SCHEDULE A
NOURYON WHOLLY OWNED SUBSIDIARIES

Nouryon Chemicals Argentina S.A.U.	Argentina	18.199 Book 86 IGJ	Buenos Aires
Nouryon Chemicals Australia Pty Ltd	Australia	64 621 806 273	New South Wales
Nouryon Chemicals NV/SA	Belgium	415916895	Mons
Nouryon Pulp and Performance Industria Química Bahia Ltda	Brazil	CNPJ 05.869.996/0001-90	Eunápolis
Nouryon Pulp and Performance Industria Química Ltda.	Brazil	CNPJ 43.818.418/0001-13	Jundiai
Nouryon Chemicals Ltd	Canada	030880-3-R	Toronto
Nouryon Pulp and Performance Canada Inc.	Canada	270265-7	Magog
Eka Chile SA	Chile	21061 folio 25899 year 2002	Santiago
Nouryon Chemicals Chile Limitada	Chile	fs 2072 no 1711	Santiago
Nouryon Functional Chemicals S.A.	Chile	76023550-4	Santiago
Eka Chemicals Chile SpA	Chile	6813 fol.11772 year 1983	Santiago
Tianjin Nouryon Peroxides Co. Ltd.	China	120000400000733	Tianjin
Nouryon New Material (Suzhou) Co. Ltd	China	320594400001435	Suzhou
Nouryon Chemicals MCA (Taixing) Co. Ltd.	China	321200400001398	Taixing
Tianjin Nouryon Chemicals Co. Ltd.	China	120000400066192	Tianjin
Nouryon Chemicals (Guangzhou) Co. Ltd	China	91440116783762879C	Guangzhou
Nouryon Chemicals (Ningbo) Co. Ltd	China	330200400016260	Ningbo
China RFD Investment Limited	China	1362748	Hong Kong
Nouryon Chemicals (BoXing) Co., Ltd.	China	3716004000006010601	Binzhou
Nouryon Business Consulting (Shanghai) Co. Ltd.	China	91310115MA1K4AXN42	Shanghai
Nouryon Chemicals (Jiaxing) Co., Ltd.	China		Jiaxing
Nouryon Finland Oy	Finland	683848	Helsinki
Nouryon Chemicals Finland Oy	Finland	1636949-4	Helsinki
Nouryon Chemicals France SAS	France	832 906 770	Bordeaux
Pontimmo Sarl	France	411364318	Montataire
Nouryon Pulp and Performance Chemicals SAS	France	454200882	Ambes
Nouryon Chemicals GmbH	Germany	HRB 63	Düren
Carbosulf Chemische Werke GmbH	Germany	HRB 1797	Köln
Nouryon Functional Chemicals GmbH	Germany	HRB 508204	Greiz
Nouryon Faser Pensionsverwaltungs-GmbH	Germany	HRB 9795	Wuppertal
Nouryon Chemicals Pensions GmbH	Germany	HRB 28629	Wuppertal
ANAVEN LLP	India	24ABIFA6635L1Z8	
Nouryon Chemicals India Private Limited	India	U24100PN2018PTC174373	Mumbai
Nouryon Chemicals S.P.A.	Italy	Milano 1222194	Milano
Kayaku Nouryon Corporation	Japan	0100-01-013790	Tokyo
Denak Co., Ltd.	Japan	0100-01-023631	Tokyo
Nouryon Japan K.K.	Japan	0100-01-071120	Tokyo
Nouryon Chemicals S.A. de C.V.	Mexico	3464	Mexico DF
Financieringsmij Konam B.V.	Netherlands	06036968	Amsterdam
Bergerode B.V.	Netherlands	31019274	Amsterdam
Nouryon Chemicals International B.V.	Netherlands	31038222	Amsterdam
Handelmaatschappij Buya B.V.	Netherlands	66606534	Amsterdam
Delamine B.V.	Netherlands	02321186	Delfzijl
Nouryon Functional Chemicals B.V.	Netherlands	32073867	Amsterdam

Nouryon Chemicals Holding B.V. Netherlands 69200386 Amsterdam
Nouryon Chemicals Finance B.V. Netherlands 69282544 Amsterdam
Nouryon Coöperatief U.A. Netherlands 71189424 Amsterdam
Nouryon Holding B.V. Netherlands 71190643 Amsterdam
Nouryon Finance B.V. Netherlands 71194339 Amsterdam
Nouryon Performance Formulations B.V. Netherlands 81204116 Amsterdam
EKA Chemicals Chile B.V. Netherlands 31039448 Amsterdam
Nouryon Pulp and Paper Chemicals B.V. Netherlands 09180839 Amsterdam
Nouryon B.V. Netherlands 83600329 Amsterdam
Nouryon Specialty Chemicals B.V. Netherlands 81195664 Amsterdam
Nouryon Pulp and Performance Chemicals Norway AS Norway 964102651 Rjukan
Nouryon Chemicals (SMC-Private) Ltd. Pakistan
OOO "Nouryon" Russian Federation 1097746745106 Moscow
Nouryon Saudi Arabia for Chemicals Company Saudi Arabia 2050147833
Nouryon Asia Pte. Ltd. Singapore 199904329H Singapore
Nouryon Surface Chemistry Pte. Ltd. Singapore 197902029C Singapore
Nouryon Chemicals SA Spain T2659,F173,H28306 Barcelona
Nouryon International Aktiebolag Sweden 556000-1629 Ale
GANSCA Deponi AktiebolagSweden 556431-3772 Sundsvall
Fastighets AB Hammarö Vidön Sweden 556808-1607 Ale
Nouryon Pulp and Performance Chemicals AB Sweden 556022 9972 Ale
Bygglim Sverige AB Sweden 5560261876 Ale
Nouryon Functional Chemicals AB Sweden 556234-9398 V Götalands län
Anholmen Fastighets AB Sweden 556235-2418 Ale
KemaNord Kraft Aktiebolag Sweden 556013-1715 Ale
Nouryon AB Sweden 556416-0967 Ale
Etenförsörjning i Stenungsund AB Sweden 556258-6536 Stenungsund
Nouryon Sweden Holding AB Sweden 559138-5405 Ale
Nouryon Surface Chemistry AB Sweden 556013-8983 Stenungsund
Nouryon Pulp and Performance Chemicals (Taiwan) Co., Ltd Taiwan22723682 Taichung
Nouryon Chemicals (Thailand) Limited Thailand 0105560129002
Nouryon Kimya Ticaret Limited Şirketi Turkey 107229-5 Erenkoy
Filtrol Corporation U.S.A. 95-0733040 Delaware
Nouryon Functional Chemicals LLC U.S.A. 36-4323457 Wilmington
Nouryon Surface Chemistry LLC U.S.A. 36-4323269 Wilmington
Fort Amanda Specialties LLC U.S.A. 3744282 Wilmington
Nouryon Salt LLC U.S.A. 6000444441 New Jersey
Nouryon US Holding 1 Inc. U.S.A. 83-1534656 Wilmington
Nouryon US Holding 2 Inc. U.S.A. 83-1879884 Wilmington
Nouryon US Holding 4 Inc. U.S.A. 83-1897181 Wilmington
Nouryon USA LLC U.S.A. 83-1197135 Wilmington
Nouryon Chemicals LLC U.S.A. 83-1197135 Wilmington
Nouryon Pulp and Performance Chemicals LLC U.S.A. 83-1197135 Wilmington
Nouryon Middle East FZE United Arab Emirates 1524 Dubai
Nouryon Chemicals Limited United Kingdom 1377820 London
Nouryon Pulp and Performance Chemicals (AC) Limited United Kingdom 3384260 Congresbury
The Particol Partnership United Kingdom Congresbury
Nouryon Pulp and Performance Chemicals Limited United Kingdom 1934005 Congresbury
Nouryon Finance 1 Ltd. United Kingdom 11584509 London
Nouryon Finance 2 Ltd. United Kingdom 11584593 London

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Nouryon Chemicals Argentina S.A.U.	Argentina	18.199 Book 86 IGJ	Buenos Aires
Nouryon Chemicals Australia Pty Ltd	Australia	64 621 806 273	New South Wales
Nouryon Chemicals NV/SA	Belgium	415916895	Mons
Nouryon Pulp and Performance Industria Química Bahia Ltda	Brazil	CNPJ 05.869.996/0001-90	Eunápolis
Nouryon Pulp and Performance Industria Química Ltda.	Brazil	CNPJ 43.818.418/0001-13	Jundiai
Nouryon Chemicals Ltd	Canada	030880-3-R	Toronto
Nouryon Pulp and Performance Canada Inc.	Canada	270265-7	Magog
Eka Chile SA	Chile	21061 folio 25899 year 2002	Santiago
Nouryon Chemicals Chile Limitada	Chile	fs 2072 no 1711	Santiago
Nouryon Functional Chemicals S.A.	Chile	76023550-4	Santiago
Eka Chemicals Chile SpA	Chile	6813 fol.11772 year 1983	Santiago
Tianjin Nouryon Peroxides Co. Ltd.	China	120000400000733	Tianjin
Nouryon New Material (Suzhou) Co. Ltd	China	320594400001435	Suzhou
Nouryon Chemicals MCA (Taixing) Co. Ltd.	China	321200400001398	Taixing
Tianjin Nouryon Chemicals Co. Ltd.	China	120000400066192	Tianjin
Nouryon Chemicals (Guangzhou) Co. Ltd	China	914401167837628 79C	Guangzhou
Nouryon Chemicals (Ningbo) Co. Ltd	China	330200400016260	Ningbo
China RFD Investment Limited	China	1362748	Hong Kong
Nouryon Chemicals (BoXing) Co., Ltd.	China	3716004000006010601	Binzhou
Nouryon Business Consulting (Shanghai) Co. Ltd.	China	91310115MA1K4AXN42	Shanghai
Nouryon Chemicals (Jiaxing) Co., Ltd.	China		Jiaxing
Nouryon Finland Oy	Finland	683848	Helsinki
Nouryon Chemicals Finland Oy	Finland	1636949-4	Helsinki
Nouryon Chemicals France SAS	France	832 906 770	Bordeaux
Pontimmo Sarl	France	411364318	Montataire
Nouryon Pulp and Performance Chemicals SAS	France	454200882	Ambes
Nouryon Chemicals GmbH	Germany	HRB 63	Düren
Carbosulf Chemische Werke GmbH	Germany	HRB 1797	Köln
Nouryon Functional Chemicals GmbH	Germany	HRB 508204	Greiz
Nouryon Faser Pensionsverwaltungs-GmbH	Germany	HRB 9795	Wuppertal
Nouryon Chemicals Pensions GmbH	Germany	HRB 28629	Wuppertal
ANAVEN LLP	India	24ABIFA6635L1Z8	
Nouryon Chemicals India Private Limited	India	U24100PN2018PTC174373	Mumbai
Nouryon Chemicals S.P.A.	Italy	Milano 1222194	Milano
Kayaku Nouryon Corporation	Japan	0100-01-013790	Tokyo
Denak Co., Ltd.	Japan	0100-01-023631	Tokyo
Nouryon Japan K.K.	Japan	0100-01-071120	Tokyo
Nouryon Chemicals S.A. de C.V.	Mexico	3464	Mexico DF
Financieringsmij Konam B.V.	Netherlands	06036968	Amsterdam
Bergerode B.V.	Netherlands	31019274	Amsterdam
Nouryon Chemicals International B.V.	Netherlands	31038222	Amsterdam
Handelmaatschappij Buya B.V.	Netherlands	66606534	Amsterdam
Delamine B.V.	Netherlands	02321186	Delfzijl

Nouryon Functional Chemicals B.V.	Netherlands	32073867	Amsterdam	
Nouryon Chemicals Holding B.V.	Netherlands	69200386	Amsterdam	
Nouryon Chemicals Finance B.V.	Netherlands	69282544	Amsterdam	
Nouryon Coöperatief U.A.	Netherlands	71189424	Amsterdam	
Nouryon Holding B.V.	Netherlands	71190643	Amsterdam	
Nouryon Finance B.V.	Netherlands	71194339	Amsterdam	
Nouryon Performance Formulations B.V.	Netherlands	81204116	Amsterdam	
EKA Chemicals Chile B.V.	Netherlands	31039448	Amsterdam	
Nouryon Pulp and Paper Chemicals B.V.	Netherlands	09180839	Amsterdam	
Nouryon B.V.	Netherlands	83600329	Amsterdam	
Nouryon Specialty Chemicals B.V.	Netherlands	81195664	Amsterdam	
Nouryon Pulp and Performance Chemicals Norway AS	Norway	964102651	Rjukan	
Nouryon Chemicals (SMC-Private) Ltd.	Pakistan			
OOO "Nouryon"	Russian Federation	1097746745106	Moscow	
Nouryon Saudi Arabia for Chemicals Company	Saudi Arabia	2050147833		
Nouryon Asia Pte. Ltd.	Singapore	199904329H	Singapore	
Nouryon Surface Chemistry Pte. Ltd.	Singapore	197902029C	Singapore	
Nouryon Chemicals SA	Spain	T2659,F173,H28306	Barcelona	
Nouryon International Aktiebolag	Sweden	556000-1629	Ale	
GANSCA Deponi Aktiebolag	Sweden	556431-3772	Sundsvall	
Fastighets AB Hammarö Vidön	Sweden	556808-1607	Ale	
Nouryon Pulp and Performance Chemicals AB	Sweden	556022 9972	Ale	
Bygglim Sverige AB	Sweden	5560261876	Ale	
Nouryon Functional Chemicals AB	Sweden	556234-9398	V Götalands län	
Anholmen Fastighets AB	Sweden	556235-2418	Ale	
KemaNord Kraft Aktiebolag	Sweden	556013-1715	Ale	
Nouryon AB	Sweden	556416-0967	Ale	
Etenförsörjning i Stenungsund AB	Sweden	556258-6536	Stenungsund	
Nouryon Sweden Holding AB	Sweden	559138-5405	Ale	
Nouryon Surface Chemistry AB	Sweden	556013-8983	Stenungsund	
Nouryon Pulp and Performance Chemicals (Taiwan) Co., Ltd	Taiwan	22723682	Taichung	
Nouryon Chemicals (Thailand) Limited	Thailand	0105560129002		
Nouryon Kimya Ticaret Limited Şirketi	Turkey	107229-5	Erenkoy	
Filtrol Corporation	U.S.A.	95-0733040	Delaware	
Nouryon Functional Chemicals LLC	U.S.A.	36-4323457	Wilmington	
Nouryon Surface Chemistry LLC	U.S.A.	36-4323269	Wilmington	
Fort Amanda Specialties LLC	U.S.A.	3744282	Wilmington	
Nouryon Salt LLC	U.S.A.	6000444441	New Jersey	
Nouryon US Holding 1 Inc.	U.S.A.	83-1534656	Wilmington	
Nouryon US Holding 2 Inc.	U.S.A.	83-1879884	Wilmington	
Nouryon US Holding 4 Inc.	U.S.A.	83-1897181	Wilmington	
Nouryon USA LLC	U.S.A.	83-1197135	Wilmington	
Nouryon Chemicals LLC	U.S.A.	83-1197135	Wilmington	
Nouryon Pulp and Performance Chemicals LLC	U.S.A.	83-1197135	Wilmington	
Nouryon Middle East FZE	United Arab Emirates	1524	Dubai	
Nouryon Chemicals Limited	United Kingdom	1377820	London	
Nouryon Pulp and Performance Chemicals (AC) Limited	United Kingdom	3384260	Congresbury	
The Particol Partnership	United Kingdom		Congresbury	
Nouryon Pulp and Performance Chemicals Limited	United Kingdom	1934005	Congresbury	
Nouryon Finance 1 Ltd.	United Kingdom	11584509	London	
Nouryon Finance 2 Ltd.	United Kingdom	11584593	London	