

From: Ortiga-Palmer, Ramona

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Subject: U.S. TRADEMARK APPLICATION NO. 76711510 - PARYLENE HT - S2007-2013 - Request for
Reconsideration Denied - Return to TTAB - Message 1 of 5

Attachment Information:

Count: 12

Files: 1-1.jpg, 1-2.jpg, 2-1.jpg, 2-2.jpg, 2-3.jpg, 2-4.jpg, 2-5.jpg, 2-6.jpg, 2-7.jpg, 2-8.jpg, 3-1.jpg,
76711510.doc

**UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)
OFFICE ACTION (OFFICIAL LETTER) ABOUT APPLICANT'S TRADEMARK APPLICATION**

U.S. APPLICATION SERIAL NO. 76711510

MARK: PARYLENE HT



CORRESPONDENT ADDRESS:

KEITH F NOE

LANDO & ANASTASI LLP

ONE MAIN ST ELEVENTH FLOOR

CAMBRIDGE, MA 02142-1517

GENERAL TRADEMARK INFORMATION:

<http://www.uspto.gov/trademarks/index.jsp>

APPLICANT: Specialty Coating Systems, Inc.

CORRESPONDENT'S REFERENCE/DOCKET NO:

S2007-2013

CORRESPONDENT E-MAIL ADDRESS:

REQUEST FOR RECONSIDERATION DENIED

ISSUE/MAILING DATE:

The trademark examining attorney has carefully reviewed applicant's request for reconsideration and is denying the request for the reasons stated below. See 37 C.F.R. §2.63(b)(3); TMEP §§715.03(a)(ii)(B), 715.04(a). The following requirement(s) and/or refusal(s) made final in the Office action dated February 23, 2015 are maintained and continue to be final: SECTION 2(e)(1) REFUSAL - MERELY DESCRIPTIVE and

ACQUIRED DISTINCTIVENESS CLAIM. *See* TMEP §§715.03(a)(ii)(B), 715.04(a). *See* TMEP §§715.03(a)(ii)(B), 715.04(a).

In the present case, applicant's request has not resolved all the outstanding issue(s), nor does it raise a new issue or provide any new or compelling evidence with regard to the outstanding issue(s) in the final Office action. In addition, applicant's analysis and arguments are not persuasive nor do they shed new light on the issues. Accordingly, the request is denied.

If applicant has already filed a timely notice of appeal with the Trademark Trial and Appeal Board, the Board will be notified to resume the appeal. *See* TMEP §715.04(a).

If no appeal has been filed and time remains in the six-month response period to the final Office action, applicant has the remainder of the response period to (1) comply with and/or overcome any outstanding final requirement(s) and/or refusal(s), and/or (2) file a notice of appeal to the Board. TMEP §715.03(a)(ii)(B); *see* 37 C.F.R. §2.63(b)(1)-(3). The filing of a request for reconsideration does not stay or extend the time for filing an appeal. 37 C.F.R. §2.63(b)(3); *see* TMEP §§715.03, 715.03(a)(ii)(B), (c).

SECTION 2(e)(1) REFUSAL - MERELY DESCRIPTIVE

Registration is refused because the applied-for mark merely describes a characteristic of applicant's goods and/or services. Trademark Act Section 2(e)(1), 15 U.S.C. §1052(e)(1); *see* TMEP §§1209.01(b), 1209.03 *et seq.*

Please note the additional evidence that shows that "PARYLENE" is descriptive of the goods and services because it indicates the type of coating that is provided:

- <http://www.matweb.com/search/datasheettext.aspx?matguid=71ead2c0ed4042328b3023f14590816f>
- <http://www.mdtmag.com/article/2007/10/next-evolution-parylene-coating>
- <http://www.qmed.com/mpmn/medtechpulse/why-parylene-still-go-medical-device-coating>

- <http://search.credoreference.com/content/entry/apdst/parylene/0?searchId=f089f51a-65e4-11e5-bcfa-0e18f8fa41cf&result=1>
- <http://www.mddionline.com/article/new-look-parylene-conformal-coatings>
- <http://www.advancedcoating.com/company.php>
- <http://www.paryleneinc.com/Parylene-Coatings-Medical.php>
- <http://www.paryleneconformalcoating.com/parylene-coating-information>
- <http://www.adamsmagnetic.com/magnet-company-info.php>
- <http://www.ppactech.com/plating-coating.htm>

Please note the additional evidence that shows HT is descriptive of the goods and services because it refers to “high temperature.” The attached webpages show that HT and “high temperature” is a term of art in the coating industry. See attachments from:

- http://protective.sherwin-williams.com/knowledge/news-and-events/2010/1216_corcoat_coatings/index.jsp
- <http://www.murraypercival.com/product/11541/techspray-fine-l-kote-ht-high-temperature-conformal-coating-12-ounce-aerosol-can-2106-12s>
- http://www.interpon.com/expertise_topics/innovations/interpon-ht/
- <http://www.brewerscience.com/waferbond-ht1010>
- <http://www.ceramicindustry.com/articles/86045-ppg-industries-high-temperature-powder-coatings>

- <http://www.belzona.com/en/products/1000/1391.aspx>

Applicant's argument that the services in class 40 do not reference polymer coatings is not persuasive because the determination of whether a mark is merely descriptive is made in relation to an applicant's goods and/or services, not in the abstract. *DuoProSS Meditech Corp. v. Inviro Med. Devices, Ltd.*, 695 F.3d 1247, 1254, 103 USPQ2d 1753, 1757 (Fed. Cir. 2012); *In re The Chamber of Commerce of the U.S.*, 675 F.3d 1297, 1300, 102 USPQ2d 1217, 1219 (Fed. Cir. 2012); TMEP §1209.01(b); *see, e.g., In re Polo Int'l Inc.*, 51 USPQ2d 1061, 1062-63 (TTAB 1999) (finding DOC in DOC-CONTROL would refer to the "documents" managed by applicant's software rather than the term "doctor" shown in a dictionary definition); *In re Digital Research Inc.*, 4 USPQ2d 1242, 1243-44 (TTAB 1987) (finding CONCURRENT PC-DOS and CONCURRENT DOS merely descriptive of "computer programs recorded on disk" where the relevant trade used the denomination "concurrent" as a descriptor of a particular type of operating system).

The evidence of record shows that PARYLENE and HT are terms commonly used in the coating industry and consumers would believe that this wording describes the goods and services. Additionally, applicant's own website indicates that they have "provided high quality Parylene conformal coating services and expertise to the medical device, electronics, automotive and military/aerospace industries." See attachments from <http://scscoatings.com/about/index.aspx>.

ACQUIRED DISTINCTIVENESS CLAIM

Applicant has asserted acquired distinctiveness based on the evidence of record; however, such evidence is not sufficient to show acquired distinctiveness because, as demonstrated by the attached and previously attached evidence, applicant's mark is of a descriptive nature. *See* 15 U.S.C. §1052(e)(1), (f); *In re MetPath, Inc.*, 1 USPQ2d 1750, 1751-52 (TTAB 1986); TMEP §1212.04(a).

Applicant's evidence submitted on September 27, 2015 includes an article titled "Electrical Conduction in Parylene HT" indicates that the wording PARYLENE HT is descriptive of the goods and the services. Applicant's evidence does not show that consumers would view the mark as a source indicator for the specified goods because the evidence of record indicates that the proposed mark is descriptive of the goods and services. Therefore, the acquired distinctiveness claim is insufficient.

When asserting a Trademark Act Section 2(f) claim, the burden of proving that a mark has acquired distinctiveness is on the applicant. *Yamaha Int'l Corp. v. Yoshino Gakki Co.*, 840 F.2d 1572, 1578-79, 6 USPQ2d 1001, 1004 (Fed. Cir. 1988); *In re Meyer & Wenthe, Inc.*, 267 F.2d 945, 948, 122 USPQ 372, 375

(C.C.P.A. 1959); TMEP §1212.01. Applicant has not established that the purchasing public has come to view the proposed mark as an indicator of origin.

/Ramona Ortiga Palmer/

Trademark Examining Attorney

571-272-9715

ramona.ortiga-palmer@uspto.gov

Law Office 117



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Specialty Coating Systems Parylene HT® Poly (P-Xylylene) Coating

Categories: [Polymer, Film, Thermoplastic, Poly \(P-Xylylene\)](#)

Material Notes: Parylene HT is a polymer of para-xylylene with the alpha hydrogen atoms of the N dimer replaced with fluorine. This variant of Parylene is useful in high temperature applications (short term up to 450°C) and those in which long-term UV stability is required. Parylene HT also has a low coefficient of friction and dielectric constant, and a high penetrating ability.

SCS Parylene conformal coatings are ultra-thin, pinhole-free polymer coatings that provide a number of high-value surface treatment properties such as excellent moisture, chemical and dielectric barrier properties, thermal and UV stability, and dry-film lubricity. Parylene coatings are used in a number of applications throughout the medical device, electronics, automotive, military and aerospace industries.

Information provided by Specialty Coating Systems (SCS).

Vendors:

Available Properties

- Water Vapor Permeability, ASTM F1249, 100% RH
- Density, ASTM D1505
- Water Absorption, ASTM D570
- Oxygen Transmission, ASTM D1434
- Nitrogen Transmission, ASTM D1434
- Carbon Dioxide Transmission, ASTM D1434
- Hardness, Rockwell R, ASTM D785
- Tensile Strength
- Tensile Strength, Yield, ASTM D882
- Elongation at Break, ASTM D882
- Elongation at Yield, ASTM D882
- Modulus of Elasticity, ASTM D5026, Secant
- Coefficient of Friction, Dynamic, ASTM D1894
- Coefficient of Friction, Static, ASTM D1894
- Volume Resistivity, ASTM D257, 50% RH
- Surface Resistance, ASTM D257, 50% RH
- Dielectric Constant, ASTM D150
- Dielectric Constant, ASTM D150
- Dielectric Constant, ASTM D150
- Dielectric Strength, ASTM D149
- Dissipation Factor, ASTM D150
- Dissipation Factor, ASTM D150

Property Data

This page displays only the text of a material data sheet.

To see MatWeb's complete data sheet for this material (including material property data, metal compositions, material suppliers, etc), please click the button below.

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- Dissipation Factor, ASTM D150
- CTE, linear, via TMA
- Specific Heat Capacity
- Thermal Conductivity, ASTM 1461
- Melting Point, via DSC
- Maximum Service Temperature, Air, ASTM 5026, Continuous
- Maximum Service Temperature, Air, ASTM 5026, Short Term
- Softening Point, T5 Point, modulus = 690 MPa (100,000 psi)
- Softening Point, T4 point, modulus = 70 MPa (10,000 psi)
- Refractive Index, ASTM D542, n_D
- Transmission, Visible
- UV Transmittance, cutoff
- UV Transmittance
- UV Transmittance
- USP Class VI

Manufacturer Notes:
none

Category Notes
Plastic

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The Next Evolution of Parylene Coating

Tue, 10/09/2007 - 4:26am by

Parylene is an excellent option for medical device manufacturers seeking a device coating for their product. Unfortunately, specific factors limit its use in certain applications. A new variation offers benefits that address these concerns. This article examines Parylene HT and the advantages it offers to device makers while addressing these previously limiting factors.

By Lonny L. Wolgemuth

Medical trends show a rapid expansion in the areas of minimally invasive diagnostic and surgical methods, many of which require various levels of instrument-embedded electronics to carry out procedures. Examples of such devices include capsule endoscopy, intravascular ultrasound catheters, and numerous other electrophysiology devices.



Collage of medical devices that benefit from protective parylene coating.

The implantable electronic device market has grown from the basic pacemaker to

multiple-capability implantable defibrillators, and is rapidly moving into areas of neuro and spinal stimulating implants. As the size of these and other complex devices shrinks while their electronic capabilities expand, protection of these microelectronics devices and their biocompatibility are foremost issues. A protective coating is needed to isolate them from contact with moisture, gases, corrosive biofluids, or chemicals. Additionally, biocompatible coatings also protect patients from contact with device surfaces, ensuring biocompatibility of implanted devices. For over 35 years, parylene has been that reliable coating solution, providing biocompatibility and excellent barrier properties to protect medical devices. Today, however, while the standard formulations for parylene still meet the coating requirements of most medical devices, a new variant offers some added benefits for medical device manufacturers.

Parylene Review

While many manufacturers are aware of existing parylene formulations, it pays to recap exactly what parylene is and what makes it different from any other type of protective coating available. In the medical device industry, two of the most beneficial properties of parylene are its excellent barrier qualities and its inherent biocompatibility and biostability. Parylene is the generic name for a unique series of polymeric organic coating materials. They are polycrystalline and linear in nature, possess useful dielectric and barrier properties per unit thickness, and are chemically inert. Parylene coatings are ultra-thin, pinhole-free, and truly conform to components due to their molecular level polymerization—basically “growing” on the deposition surface one molecule at a time.



Comparison of uncoated (above) to coated (below) board after identical testing





Due to the method by which they are deposited, parylene coatings are extremely lightweight, offering excellent barrier properties without adding dimension or significant mass to delicate components. Parylene is typically applied in thickness ranging from 500 angstroms to 75 microns. A 25 micron coating, for example, will have a dielectric capability in excess of 5,000 volts. While few medical devices operate at 5,000 volts, a 10 micron coating can provide most devices with the electrical and moisture protection they require. No other coating materials can be applied as thinly as parylene and still provide the same level of protection. Parylene coatings are applied via a vapor deposition process rather than as a spray, brush, or dip process. The parts to be coated are placed in the deposition chamber. The powdered raw material, known as "dimer," is placed in the vaporizer at the opposite end of the deposition system. The dimer is heated, causing it to sublimate to a vapor, then heated again to break it into a monomeric vapor. This vapor is then transferred into an ambient temperature chamber where it spontaneously polymerizes onto the parts, forming the thin parylene film. The parylene process is carried out in a closed system under a controlled vacuum, with the deposition chamber remaining at room temperature throughout the process. No solvents, catalysts, or plasticizers are used in the coating process.

Because there is no liquid phase in this deposition process, there are no subsequent meniscus, pooling, or bridging effects as seen in the application of liquid coatings, thus dielectric properties are never compromised. The molecular "growth" of parylene coatings also ensures not only an even, conformal coating at the thickness specified by the manufacturer, but because parylene is formed from a gas, it also penetrates into every crevice, regardless of how seemingly inaccessible. This ensures complete encapsulation of the substrate without blocking small openings.

Why Was a New Parylene Needed?

While the existing parylene variants are quite able to meet many medical coating challenges, there are new technologies that need a little bit more capability.

The recent commercial availability of Parylene HT gives an extra advantage for medical device and medical electronic applications. Parylene HT possesses unique properties including increased dielectric capabilities and superior thermal and UV stability. The new variant of parylene was developed by replacing the alpha hydrogen

stability. The new variant of parylene was developed by replacing the alpha hydrogen atom of the Parylene N dimer with fluorine.



Stages of the parylene deposition process

Parylene HT was developed to provide protection in high temperature environments up to 350°C (short term up to 450°C), and long-term UV stability. It also has the lowest coefficient of friction, a very low dielectric constant, and the highest penetrating capability of all the parylenes. The coating is not limited to medical electronic applications, but also protects silicone, glass, composites, plastics, ceramics, and ferrite components.

All parylenes are applied in the same manner and provide the similar basic barrier and dielectric properties. Parylene HT just goes a step further.

Application Examples

Ultraviolet Resistance: Parylenes N and C are fairly susceptible to ultraviolet light and have only a moderate operating temperature. As such, these parylenes perform poorly in applications which require prolonged exposure to ultraviolet light, ultimately breaking down and degrading.

For device and implant manufacturers who are working in the ocular area, coating survival in the face of prolonged exposure to ultraviolet light is an absolute necessity. When designing an ocular implant to treat a disease or as a permanent solution to correct a physical defect of the eye, selecting a coating that provides biocompatible barrier protection is also important. Parylene HT solves these issues by

providing barrier protection that is biocompatible and impervious to ultraviolet light.

High Operating Temperature: Parylene C has a higher operating temperature than Parylene N, but can still only operate at about 80°C long term (100°C short term). Parylene HT can operate continuously at 350°C and can also withstand short term exposures to 450°C.

Many ESU (electrosurgical) devices use RF energy to cut or coagulate tissue. The instantaneous temperatures during this cutting or coagulation process are well into triple digits. Parylene HT is an excellent coating for these types of instruments and acts as both an insulator and a bio-protective coating.

Sterilization is another issue. Although most "smart" catheter and probe applications are one-time use devices, the goal may be to move more into the multi-use category, offering lower cost and longer function. To do this, the device must be able to withstand repeated sterilization cycles. While parylene coatings handle other methods of sterilization quite well, some methods of autoclave sterilization have temperatures that challenge the survival of Parylenes N and C. Parylene HT, with its high thermal stability, is better suited to withstand steam autoclave temperatures.

Low Coefficient of Friction: Parylene HT is an ideal coating to protect devices that need to move easily into or through other instruments or through openings in the human body. It has a coefficient of friction that compares favorably with that of PTFE. It is very slippery, making it an ideal coating for devices that require dry film lubricity, including epidural probes, needles, catheter guidewires, and similar penetrating devices, as well as elastomeric seals. Parylene HT increases the lubricity on these devices without measurably changing the dimensions of the device.

High Penetration Ability: Parylene coatings are able to penetrate extremely small areas such as crevices on devices or the open end(s) of hypotubes. Compared to Parylene N and C, Parylene HT is able to penetrate 25% further into these openings. This penetration ability is extremely valuable on MEMS and nano-devices which enable a vast array of capabilities on the tip of a probe, an endoscope, or other diagnostic or surgical devices. Parylene HT opens the door for more opportunities where components are in nano dimensions and coatings must penetrate very small areas, providing complete coverage without compromising operational capabilities.

Lowest Dielectric Constant and Dissipation Factor: Parylene HT has the lowest dielectric constant and dissipation factor of the parylenes. These two terms refer to a

material's distortion of the electrical signals in their presence. For Parylene HT, these are extremely low. With even more RF and other forms of wireless devices entering examination and treatment rooms and surgical areas, precise and undistorted signals are becoming increasingly important. While all parylenes are excellent candidates for use in medical electronic devices because of their bulk electrical properties, Parylene HT is particularly well suited for high frequency device applications due to its very low dielectric constant and dissipation factor.

Benefits for Device Manufacturers

Parylene HT is not intended to replace Parylenes N and C, but rather joins the family by bringing additional capabilities to a line of coatings that already has a lot to offer the medical device designer and manufacturer.

Parylene N and C, variants that have served the industry for over 35 years, are still the coating answer for many device manufacturers. However, when dealing with high temperatures, UV light, nanotechnology devices, or designs in the UHF RF arena, Parylene HT is available and provides exemplary protection for applications facing these challenges.

Finally, it is important to note that while Parylene N, C, and HT are biostable and biocompatible, not all parylene providers cater to the specific needs of the medical device industry. It is up to the user to check with the individual coating service provider to determine if GLP biological evaluations have been performed and to request specific test results and the relevant certifications.

Online

For additional information on the technologies and products discussed in this article, see MDT online at www.mdmtmag.com or Specialty Coating Systems at www.scscoatings.com.

Lonny Wolgemuth is a medical specialist for Specialty Coating Systems. His responsibilities include expansion of SCS' medical activities and new medical applications for parylene conformal coatings. Wolgemuth has been active in the medical device industry for over 35 years, with experience ranging from in-hospital clinical engineering to product management, market management, and national technical support management. He can be reached 317-244-1200 or lwolgemuth@scscoatings.com.

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Why Parylene Is Still a Go-To Medical Device Coating

Posted in Surface Treatment Coatings by Chris Newmarker on May 2, 2014

Include parylene with the list of medical device materials that have been around for decades, in this case providing a reliable protective coating for devices.

Part of the reason may have to do with how difficult it is to get new types of materials approved with the FDA. But Specialty Coating Systems officials are quick to point out that parylene has plenty of benefits going for it.

See Dick Molin, senior medical market specialist at Specialty Coating Systems, discuss parylene at the Tech Theater at MD&M Texas, May 7-8, 2014, at the Fort Worth Convention Center.

Here's what Carla R. Gillespie, a marketing communications manager at Indianapolis-based SPC, had to say about parylene:

MPMN: Describe a little bit about what parylene is? How long has it been used to coat medical devices? How long has Specialty Coating Systems used it?

Gillespie: Parylene conformal coatings are ultra-thin, pinhole-free polymer coatings that provide a number of high-value surface treatment properties. SCS is the direct descendent of the company that originally commercialized parylene over 40 years ago and the coating has protected medical devices nearly all of those years.

MPMN: What are the advantages of parylene? Is it being used more to coat medical devices, and why?

Gillespie: Parylene coatings are biocompatible and biostable, and offer excellent moisture, chemical, and dielectric barrier protection, thermal and UV stability, and have a low coefficient of friction for applications where lubricity is important. Parylene has long been beneficial in medical applications, but as medical devices become smaller and more compact, parylene certainly finds

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