

**510k Summary**  
**AVAIRA (enfilcon A) Sphere and Toric**  
**Contact Lenses**  
**12/20/2013**

DEC 23 2013

**Applicant:** CooperVision, Inc.  
6150 Stoneridge Mall Road, Suite 370  
Pleasanton, CA 94588 USA

**Applicant Contact:** Annette Nelson  
Senior Regulatory Affairs Specialist  
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**Email:** anelson@coopervision.com

**Date Prepared:** November 15, 2013

**Device Trade Name:** AVAIRA Sphere and Toric Soft Contact Lenses

**Common/Usual Name:** Enfilcon A Soft (Hydrophilic) Contact Lens

**Classification Name:** Soft (Hydrophilic) Contact Lens, Daily Wear, Disposable

**Device Classification:** Class II (21 CFR 886.5925); Product Codes MVN and LPL

**Predicate Devices:** AVAIRA Sphere and Toric Soft Contact Lenses  
(K071736/K113759)

**Device Description:**

The Avaira (enfilcon A) soft contact lens is a daily wear silicone hydrogel contact lens that is not surface treated and is characterized by a high oxygen permeability (Dk). The lens material, *enfilcon A*, is composed of silicone macromers cross linked with other monomers, incorporating phthalocyanine blue as an integrated handling tint. A UV blocker is added to reduce the amount of ultraviolet light transmitted into the eye. The Avaira (*enfilcon A*) Soft (hydrophilic) contact lenses are a hemispherical shell. This 510(k) submission covers a process modification to add a step to the preparation of the monomer mixture. The physical properties and dimensions of the finished lenses are unchanged from predicate 510(k)s.

**Intended Use:*****SPHERICAL:***

Avaira (*enfilcon A*) SPHERE Soft Contact lenses are indicated for the correction of ametropia (myopia and hyperopia) in aphakic and non-aphakic persons with non-diseased eyes. The

lenses may be worn by persons who exhibit astigmatism of 2.00 diopters or less that does not interfere with visual acuity.

*TORIC:*

Avaira (*enfilcon A*) TORIC Soft Contact lenses are indicated for the correction of ametropia (myopia or hyperopia with astigmatism) in aphakic and non-aphakic persons with non-diseased eyes in powers from -20.00 to +20.00 diopters and astigmatic corrections from -0.25 to -10.00 diopters.

Physiochemical Studies

In-vitro studies measuring the physical, optical and chemical properties of lenses subjected to the modified manufacturing process were performed. The results show there is no significant change to the physicochemical properties of the lenses.

Tested Characteristics	Results
Refractive Index, Total Extractables, Monomer Residuals, Ionoflux, Contact Angle, UV Transmission, Modulus, Elongation, Tensile Strength, and Power Conformance	Pass

Clinical Studies

In-vivo clinical studies were not required for this change, as the dimensions, formulation, lens manufacturing process, and product specifications remain the same.

Conclusion

*Validity of Scientific Data*

Physiochemical studies were conducted by CooperVision following scientific protocols.

*Substantial Equivalence*

The information presented in this submission establishes the substantial equivalence of the modified AVAIRA (*enfilcon A*) SPHERE and TORIC daily wear contact lenses to the predicate devices. The following table summarizes the substantial equivalence comparison information.

<b>Substantial Equivalence Comparison</b>		
<b>Characteristic</b>	<b>AVAIRA SPHERE and TORIC (K071736/K113759)</b>	<b>AVAIRA SPHERE and TORIC (This Submission)</b>
Indications for Use AVAIRA SPHERE	Correction of ametropia in aphakic and non-aphakic persons with non-diseased eyes and astigmatism $\leq 2.00$ diopters	Same
Indications for Use AVAIRA TORIC	Correction of ametropia (myopia or hyperopia with astigmatism) in aphakic and non-aphakic persons with non-diseased eyes in powers from -20.00 to +20.00 diopters and astigmatic correction from -0.25 to -10.00 diopters	Same
Single Use	Single-use, disposable	Same
Replacement	Daily Wear, disinfect using chemical or hydrogen peroxide disinfectant when prescribed for planned replacement	Same
Material USAN Name	enfilcon A	Same
Principle of Operation	Designed to fit over corneal surface of eye to provide corrective refraction for functional conditions of the eye	Same
Refractive Index	1.40	Same
Oxygen Permeability $\times 10^{-11}$	100 ( $\text{cm}^2/\text{sec})(\text{ml O}_2)/\text{ml}\cdot\text{mmHg}$ )	Same
Base Curve	8.2 to 9.2 mm	Same
Diameter	13.5 to 15.0 mm	Same
Power Range	-20.00 to +20.00 D	Same
Cylinder Power	-0.25 to -10.00 D	Same
Water Content (avg, %wt)	46%	46%
Monomer sonication step	No	Yes



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

December 23, 2013

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center - WO66-G609  
Silver Spring, MD 20993-0002

CooperVision, Inc.  
% Ms. Annette Nelson  
Senior Regulatory Affairs Specialist  
6150 Stoneridge Mall Road, Suite 370  
Pleasanton, CA 94588

Re: K133627

Trade/Device Name: AVAIRA Sphere and Toric Soft Contact Lenses  
Regulation Number: 21 CFR 886.5925  
Regulation Name: Soft (hydrophilic) Contact Lens  
Regulatory Class: Class II  
Product Code: LPL  
Secondary Product Code: MVN  
Dated: November 15, 2013  
Received: November 26, 2013

Dear Ms. Nelson:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies.

You must comply with all the Act's requirements, including, but not limited to: Registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

**Deborah L. Falls -S**

for Malvina B. Eydelman, M.D.  
Director  
Division of Ophthalmic and Ear,  
Nose and Throat Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

### Indications for Use

510(k) Number: K133627

Device Name: AVAIRA (enfilcon A) Sphere and Toric Soft Contact Lenses

#### Indications For Use:

AVAIRA (enfilcon A) SPHERE Soft (Hydrophilic) Contact Lenses are indicated for the correction of ametropia (myopia and hyperopia) in aphakic and non-aphakic persons with non-diseased eyes. The lenses may be worn by persons who exhibit astigmatism of 2.00 diopters or less that does not interfere with visual acuity.

AVAIRA (enfilcon A) TORIC Soft (Hydrophilic) Contact Lenses are indicated for the correction of visual ametropia (myopia or hyperopia with astigmatism) in aphakic and non-aphakic persons with non-diseased eyes in powers from -20.00 to +20.00 diopters and astigmatic corrections from -0.25 to -10.00 diopters.

#### DAILY DISPOSABLE:

The AVAIRA (enfilcon A) Soft (hydrophilic) Contact Lenses are indicated for single-use disposable wear.

#### FREQUENT REPLACEMENT:

The AVAIRA (enfilcon A) Soft (hydrophilic) Contact Lenses are indicated for daily wear. When prescribed for planned replacement the lens may be disinfected using a chemical or hydrogen peroxide disinfecting system.

Prescription Use   X   AND/OR Over-The-Counter Use \_\_\_\_\_  
(part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE- CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Jeffrey M. Brocious -S  
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(Division Sign-Off)  
Division of Ophthalmic and Ear, Nose, and  
Throat Devices  
510(k) Number:           K133627