

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF NORTH CAROLINA  
CHARLOTTE DIVISION

Celgard, LLC,	)	
	)	
Plaintiff,	)	
	)	Civil Action No. 13-cv-254
v.	)	
	)	
SK Innovation Co., Ltd.,	)	<b>JURY TRIAL DEMANDED</b>
	)	
Defendant.	)	
	)	

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Celgard, LLC (“Plaintiff” or “Celgard”), for its Complaint against Defendant SK Innovation Co., Ltd. (“Defendant” or “SK Innovation”), states as follows:

**NATURE OF ACTION**

1. This is an action under the patent laws of the United States, 35 U.S.C. § 1, *et seq.*, for infringement by SK Innovation of a patent owned by Celgard.
2. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

**THE PARTIES**

3. Plaintiff Celgard is a company organized under the laws of the State of Delaware having its headquarters at 13800 South Lakes Drive, Charlotte, North Carolina 28273. Celgard’s parent company, Polypore International, Inc., is a publicly-traded company also headquartered in Charlotte, North Carolina.
4. Celgard is well-known internationally as a leader in the lithium-battery material industry.

5. SK Innovation is a company organized under the laws of the Republic of Korea with its principal place of business at 99 Seorin-dong, Jongro-gu 110-110, Seoul, South Korea.

**U.S. PATENT NO. 6,432,586**

6. Celgard is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,432,586 (“the ‘586 patent”), including the right to sue for past damages. Accordingly, Celgard has standing to bring this action for patent infringement. The ‘586 patent was duly and legally issued by the United States Patent and Trademark Office on August 13, 2002, is active, and is entitled “Separator for a High Energy Rechargeable Lithium Battery.” A true and correct copy of the ‘586 patent is attached hereto as Exhibit A.

7. The ‘586 patent relates generally to separators for use in lithium-ion batteries, such as lithium-ion battery separators that have a ceramic composite layer or coating. Lithium-ion battery separators are separators placed between the anode and cathode of a lithium-ion battery in order to help prevent contact between the anode and cathode. This is sometimes referred to as preventing shorting. Separators described and claimed in the ‘586 patent provide this and/or other benefits in an effective manner.

**SK INNOVATION, ITS INFRINGING CONDUCT,  
JURISDICTION, AND VENUE**

8. SK Innovation is a Korean company engaged in multiple lines of business, and it develops, manufactures, offers for sale, exports, and sells lithium-ion battery separators and high energy lithium-ion batteries that include separators.

9. On information and belief, SK Innovation, either directly or through other entities under its direct control, manufactures and sells lithium-ion battery separators that fall within the scope of one or more claims of the ‘586 patent (or are equivalent thereto) (referred to herein as “infringing battery separators”).

10. On information and belief, SK Innovation, either directly or through other entities under its direct control, offers for sale and/or sells infringing battery separators directly into the United States. For example, on information and belief, SK Innovation offered for sale and/or sold infringing battery separators to a battery manufacturing company in the United States and has shipped and imported infringing battery separators to that company, at least since 2012. On information and belief, that company has used the infringing battery separators received from SK Innovation in the United States. As another example, on information and belief, SK Innovation offered for sale and/or sold and/or imported infringing battery separators to an automotive industry organization in the United States for their use in the United States, at least since 2010. On information and belief, that automotive industry organization has used the infringing battery separators received from SK Innovation in the United States.

11. Such importation, use, offer for sale, and/or sale of infringing battery separators in the United States constitutes direct infringement of one or more claims of the '586 patent. Celgard has not authorized any of this infringing conduct.

12. SK Innovation knows of and has known of the '586 patent. For example, SK Innovation has learned of the '586 patent through its own efforts in acquiring intellectual property rights and protecting its intellectual property. The '586 patent was identified as a patent citation in SK Innovation's PCT patent application No. PCT/KR2011/005978 which was published as WO2012021044A3 on February 16, 2012 and is titled "Pore protected multi layered composite separator and the method for manufacturing the same." SK Innovation has therefore had knowledge of the '586 patent since at least February 16, 2012, the date of publication of its PCT application.

13. On information and belief, SK Innovation also learned of the '586 patent through its involvement in patent litigations. SK Innovation was involved in patent infringement litigation against a major competitor in at least 2011 and 2012. That litigation involved Lithium-ion battery separators. On information and belief, SK Innovation learned of the '586 patent at least during such litigation. A foreign counterpart of the '586 patent, Japanese Patent No. JP2001319634, is cited as prior art in one of the patents at issue in that litigation. On information and belief, SK Innovation became aware of the '586 patent at least by the time of such litigation through SK Innovation's research and analysis of prior art.

14. On information and belief, SK Innovation also knows of the '586 patent because of its knowledge of intellectual property rights in the lithium-ion battery separator industry. The '586 patent has been cited multiple times by leaders in the industry. It has been cited by more than twenty other United States patents owned by more than seven companies heavily involved in the lithium-ion battery industry, including in at least six United States patents owned by the competitor with which SK Innovation litigated over patent rights for battery separators.

15. On information and belief, SK Innovation also learned of the '586 patent through press reports related to Celgard's recent suit against Sumitomo Chemical Co., Ltd., which, like this case, is an action for infringement of the '586 patent.

16. SK Innovation has knowledge of the '586 patent through the filing of the present lawsuit against SK Innovation as well.

17. SK Innovation has been involved in lithium-ion battery separator technology for some time and is highly educated in the technical subject matter of lithium-ion battery separators. On information and belief, upon obtaining knowledge of the '586 patent, and in light of its high degree of education and knowledge of the technical field, SK Innovation knew

that its activities (including its offerings for sale, sales, and importation) relative to the infringing separators constituted direct infringement of the '586 patent in the United States and that its activities caused others who used, offered for sale, and/or sold the infringing battery separators or batteries containing such separators to directly infringe the '586 patent in the United States.

18. On information and belief, SK Innovation specifically intended that others, such as the battery manufacturing company and automotive organization in the United States mentioned above, use its infringing battery separators in the United States. SK Innovation owns multiple patents of its own and is familiar with the standards of patent infringement, including through its involvement in patent litigation. On information and belief, in light of its knowledge of the '586 patent, SK Innovation knew that the use, importation, offer for sale, and sale by others of its infringing battery separators in the United States constitutes direct patent infringement of the '586 patent. On information and belief, SK Innovation provided the product, technical information, and technical support relative to such use of the infringing battery separators, including to the above-mentioned battery manufacturing company and organization in the United States, which evidences SK Innovation's specific intent that such infringing use occur.

19. SK Innovation is a sophisticated company and is very familiar with patents through ownership of its own patents. A reasonable person reading the '586 patent and knowing of SK Innovation's infringing battery separators would know that the infringing battery separators infringe the '586 patent and that SK Innovation's activities induce infringement of the '586 patent in the United States.

20. The specific instances of infringement described above are provided as examples. On information and belief, SK Innovation has engaged in at least other offers for sales, importations, and/or sales of infringing battery separators in the United States.

21. On information and belief, this Court has personal jurisdiction over SK Innovation because, at a minimum, SK Innovation has sold and has negotiated the further sale of infringing battery separators with residents of the State of North Carolina and this judicial District and has directed offers for sale of infringing separators to persons residing in this judicial District. On information and belief, SK Innovation has solicited orders for sale of infringing battery separators from residents of the State of North Carolina and this Judicial district and, after receiving such orders, shipped, either directly or through a third party under its direction, infringing battery separators into the United States.

22. On information and belief, this Court also has personal jurisdiction over SK Innovation based on the following contacts purposefully directed at the United States:

a. SK Innovation frequently displays and promotes its products at trade shows throughout the United States. For example, on information and belief, SK Innovation displayed and/or promoted infringing battery separators at national trade shows and conferences including, but not limited to, the 2008 Advanced Automotive Battery Conference (AABC) in Florida, the 2009 AABC in California, and the 2011 AABC in California.

b. SK Innovation entered into an agreement with the United States Advanced Battery Consortium in 2010 to test lithium-ion battery cells containing infringing battery separators at national laboratories located in Colorado, Illinois, and New Mexico.

c. SK Innovation owns property in the United States. For example it has filed multiple patent applications in the United States, including a patent application entitled

“Microporous Polyethylene Film With Thermally Stable Hybrid-Composite Layers,” filed on June 17, 2010 having the application serial number 13/320,863, and published on March 20, 2012 (Pub. No. US 2012/0077113).

d. Subsidiaries and affiliates of SK Innovation operate throughout the United States. On information and belief, a subsidiary of SK Innovation, SK Mobile Energy Co., Ltd., maintains a battery research center in the state of New Jersey and has sought and procured approval of its battery products from the U.S. Pentagon in Washington, DC. On information and belief, SK Innovation is in regular contact with its subsidiaries and affiliates in the United States and directs communication into the United States.

e. SK Innovation and its wholly-owned subsidiaries have registered and maintain a number of U.S. Trademarks, including, but not limited to, marks for the words “Greenpol,” “Zic,” and “Nexlene.”

f. SK Innovation maintains an English-version website at <http://eng.skinnovation.com/>. On this website, SK Innovation provides information regarding its activities and products, including SK Innovation infringing products, as well as the activities of its U.S. Subsidiaries. Websites maintained by trade show organizations located in the United States, including but not limited to the 2012 AABC, have linked to SK Innovation’s website. On information and belief, SK Innovation’s website is directed to marketing, offering for sale, and selling its products and services in the United States, including directed to marketing, offering for sale, and selling its products and services in the Western District of North Carolina.

g. SK Innovation also manages and conducts business in the United States through several wholly-owned and operated U.S. subsidiaries. On information and belief, SK Innovation regularly sends communication and directions to such subsidiaries. These

subsidiaries include:

- i. SK E&P Company, which has registered to do business in Michigan for the purpose of importing and selling electric car batteries in the local market;
- ii. SK USA, Inc., which conducts business related to management consulting and/or corporate development;
- iii. SK Innovation Americas, Inc., which conducts service-related business activities; and
- iv. SK Energy Americas, Inc., which conducts business related to trading activities and is registered to conduct business in North Carolina.

23. On information and belief, SK Innovation derives substantial revenues from the activities of its U.S. Subsidiaries in the United States.

24. Venue is proper in this judicial district pursuant to at least 28 U.S.C. §§ 1391(c) and 1400(b).

### **COUNT I**

#### **(Direct Infringement of United States Patent No. 6,432,586)**

25. Celgard realleges and incorporates herein by reference the allegations set forth in Paragraphs 1-24 of this Complaint.

26. On information and belief, SK Innovation has directly infringed and continues to directly infringe the '586 patent in violation of 35 U.S.C. § 271(a). For example, on information and belief, SK Innovation, either directly or through other entities under its direct control, has offered for sale, sold, and imported infringing battery separators directly into the United States. For example, on information and belief, SK Innovation has offered for sale, sold, and imported to the battery manufacturing company and automotive organization described above in the



United States infringing battery separators. Additionally, on information and belief, SK Innovation has offered for sale its infringing battery separators at various conferences and trade shows throughout the United States. The specific situations identified are given by way of example only. On information and belief, the examples given are not the only instances of infringement of the '586 patent by SK Innovation.

27. On information and belief, SK Innovation will continue in its infringement of the '586 patent unless and until it is enjoined by this Court.

28. Celgard has been and continues to be damaged by SK Innovation's infringement of the '586 patent.

## **COUNT II**

### **(Induced Infringement of United States Patent No. 6,432,586)**

29. Celgard realleges and incorporates herein by reference the allegations set forth in Paragraphs 1-28 of this Complaint.

30. On information and belief, SK Innovation has induced and continues to induce infringement of the '586 patent in violation of 35 U.S.C. § 271(b). On information and belief, SK Innovation does so, for example, by selling infringing battery separators with the knowledge and intent that they are to be incorporated into lithium-ion batteries in the United States and used in the United States as described above. This use by others constitutes direct infringement of the '586 patent. For example, on information and belief, SK Innovation offers for sale and sells infringing battery separators to the above-mentioned battery manufacturing company in the United States and that company incorporates the infringing battery separators into lithium-ion batteries and uses the lithium-ion batteries in the United States, which is a direct infringement of the '586 patent. On information and belief, SK Innovation actively encourages this infringing

use by, for example, selling the infringing separators to the battery manufacturing company, providing technical support to this company relative to the infringing separators, and otherwise encouraging the use of the infringing separators in the United States. On information and belief, SK Innovation knows of the use by the battery manufacturing company, which is a direct infringement of the '586 patent, and has the specific intent that this direct infringement of the '586 patent occur. On information and belief, SK Innovation derives profit from its sales of infringing battery separators, including its sales of batteries including infringing battery separators.

31. On information and belief, SK Innovation will continue to induce infringement of the '586 patent unless and until it is enjoined by this Court.

32. Celgard has been and continues to be damaged by SK Innovation's infringement of the '586 patent.

### **PRAYER FOR RELIEF**

WHEREFORE, Celgard respectfully prays that this Court:

- a. Enter a judgment that SK Innovation has infringed the '586 patent;
- b. Enter a judgment that SK Innovation has induced the infringement of the '586 patent;
- c. Grant a permanent injunction restraining and enjoining SK Innovation, its officers, directors, agents, servants, employees, successors, assigns, parents, subsidiaries, affiliated or related companies, and attorneys from directly or indirectly infringing the '586 patent;
- d. Award Celgard damages in an amount sufficient to compensate Celgard for SK Innovation's infringement of the '586 patent, but not less than a reasonable royalty;

- e. Award prejudgment interest to Celgard under 35 U.S.C. § 284;
- f. Grant such other and further relief as this Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Celgard hereby demands a jury trial on all issues appropriately triable by a jury.

Dated: April 26, 2013

Respectfully submitted,

/s/ Steven Gardner

Steven Gardner

N.C. Bar No. 20984

KILPATRICK TOWNSEND & STOCKTON LLP

1001 West Fourth Street

Winston-Salem, NC 27101

(336) 607-7300 (telephone)

(336) 607-7500 (facsimile)

sgardner@kilatricktownsend.com

Lance A. Lawson

N.C. Bar No. 23835

SHUMAKER LOOP & KENDRICK LLP

First Citizens Bank Plaza

128 South Tryon Street, Suite 1800

Charlotte, NC 28202-5013

(704) 945-2912 (telephone)

(704) 332-1197 (facsimile)

llawson@slk-law.com

*Attorneys for Celgard, LLC*