



Celgard and Æsir Technologies Forge Strategic Alliance to Drive Industry Innovation in Nickel-Zinc, Zinc-Air and Lithium-Zinc Batteries

CHARLOTTE, N.C., Jan. 29, 2024 – Celgard, LLC (Celgard), a subsidiary of Polypore International, LLC (Polypore), is pleased to announce a newly formed Alliance with Æsir Technology, Inc. (Æsir), a leading manufacturing company that specializes in developing next-generation Nickel-Zinc battery technology. This chemistry offers a stable cost-effective recyclable option with energy density in between lithium-ion and lead-acid batteries, making it an ideal choice for many applications.

Together, Celgard and Æsir will collaborate on joint research projects to further develop high-technology next-generation Nickel-Zinc (Ni-Zn), Zinc-Air (Zn-Air) and Lithium-Zinc (Li-Zn) and Sodium-Zinc (Na-Zn) batteries used primarily in aviation, data centers, telecom, energy infrastructure and electric vehicle (EV) charging applications.

Under the terms of the agreement, Celgard will supply 100% of Æsir’s battery separators for current applications as well as future needs for a new battery gigafactory that is planned for 2024 to initially service the data center and 5G telecom markets. Celgard will also be positioned to offer separator products to future Ni-Zn and Li-Zn Æsir licensees or joint ventures.



Dave Wilkins, Æsir’s chairman and chief technology officer, said: “Celgard provides a special ‘Technology-Enabling’ separator that is integral to Æsir’s Ni-Zn performance, and we are excited to work closely with them to further drive innovation in our industry,” and Stefan Reinartz, Celgard’s vice president of lithium-ion EDV and ESS added the following: “Celgard looks forward to advancing next-



generation Ni-Zn technology with Æsir that is critical to energy storage systems and powering communities by continuing to be at the center of membrane separator innovation.”

Additionally, Asahi Kasei, Polypore and Celgard’s parent company, may further support the Ni-Zn supply chain through its widely diversified manufacturing base and Æsir will evaluate component supply opportunities for items such as plastic battery packs and thermal retardant materials that could further benefit the Ni-Zn supply chain and industry.

About Celgard and Polypore

Celgard specializes in solvent-free, coated and uncoated, dry-process microporous membranes used as separators that are a major component of lithium-ion batteries. Celgard's battery separator technology is important to the performance of lithium-ion batteries for electric drive vehicles, energy storage systems and other applications.

Celgard, LLC is a wholly-owned subsidiary of Polypore International, LLC, an Asahi Kasei Company.

Polypore is a global company with facilities in nine countries specializing in microporous membranes used in electric and nonelectric vehicles, energy storage systems and specialty applications. Visit www.celgard.com and www.polypore.com.

About Æsir Technologies, Inc.

Æsir Technologies, Inc. specializes in developing next-generation Ni-Zn battery technologies that utilize sustainable, non-toxic materials that can be safely and easily recycled. Æsir was incorporated in 2011 and has a research and development facility in Bozeman, Montana and a production facility in Joplin, Missouri. Æsir has numerous contracts for Ni-Zn batteries with the Department of Defense and installed the first Ni-Zn batteries in a data center, which have been operating successfully for over four years.

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