



HPQ Silica Polvere Fumed Silica Reactor: Commissioning Completed

Pilot plant ready to start producing materials

Montreal, Canada, September 27th, 2024 — [HPQ Silicon Inc.](#) (“HPQ” or the “Company”) ([TSX-V: HPQ](#), [OTCQB: HPQFF](#), [FRA: O08](#)), a technology company specializing in the green engineering of silica and silicon-based materials is pleased to announce that HPQ Silica Polvere Inc. (“HSPI”)^[1] has reached a major milestone in the commercial validation of its proprietary Fumed Silica Reactor (“FSR”) process.

Technology supplier [PyroGenesis Canada Inc.](#) ([TSX: PYR](#), [OTCQX: PYRGE](#), [FRA: 8PY](#)) (“PyroGenesis”) has informed HSPI that, with the successful completion of the FSR hot blank test, the commissioning of the pilot plant is now complete.

“With the pilot plant now ready to produce materials, we are one step closer to providing sample materials for external testing while showcasing the remarkable potential of our FSR technology,” said Bernard Tourillon, President & CEO of HPQ Silicon and HPQ Silica Polvere. *“We are highly confident that the next steps in the program will be completed successfully. This is a unique opportunity, and we are proud to be at the forefront of a transformation that will revolutionize fumed silica manufacturing.”*

“The Fumed Silica project is an important project for PyroGenesis, due not only to the overall market size and breadth for fumed silica but also because of the increasing demand for a safer production method for a product that has traditionally been made using volatile chemicals under potentially hazardous conditions,” said Mr. P. Peter Pascali, President and CEO of PyroGenesis. *“With the successful commissioning of the FSR pilot plant, we move one step closer to bringing our innovative, safe, and energy-efficient production approach to market for one of the industry’s most in-demand materials.”*

Q3 FSR Commissioning Bridges Lab Scale to Pilot Plant and Commercial Scale

The commissioning process validates that the FSR is ready for operation following the successful hot blank test. It also aimed to optimize the transition from the lab-scale FSR—which had already produced Fumed Silica meeting Evonik’s specifications (as per the [July 9th, 2024, release](#))—to the Pilot Plant FSR.

Additionally, data collected during the commissioning period enabled the development of a revised model for the energy required to produce 1 kg of fumed silica at a commercial scale of at least 1,000 tonnes per year (TPY), along with its associated carbon footprint (as per the [August 15th, 2024, release](#)). It also allowed the validation of system design concepts that could help minimize risks and reduce the time required to scale from the 50 TPY pilot plant to the 1,000 TPY commercial-scale plant, ensuring a smoother transition to full-scale production.

Pilot Plant Project Timeline

With the commissioning phase completed, the program is now advancing into the batch production phase, during which the FSR will begin manufacturing fumed silica. The primary goal at this stage is to validate the process’s ability to consistently replicate key physical properties—such as surface area—and rheological properties, including viscosity and thickening behavior, as demonstrated at the lab scale. Once this milestone is achieved, the system will transition to semi-continuous operation, targeting the production of at least 200 kg of commercial-grade fumed silica samples for comprehensive testing and validation.

Throughout these phases, the produced fumed silica will undergo internal testing, and samples will be sent to Evonik and potentially other parties under NDA for evaluation. By Q1 2025, the focus will shift to optimizing pilot plant operations to produce food- and pharma-grade fumed silica with surface areas of 300 m²/g. In addition to producing material with surface areas ranging from 150 to 300 m²/g, the overarching goal is to operate the pilot plant at full capacity, running multiple daily production cycles



and delivering commercial-quality material. Assuming 20 hours of daily operation, the system could produce approximately 161 kg per day or 50,000 kg per year (50 TPY).

REFERENCE SOURCES

[1] A wholly owned subsidiary of HPQ Silicon Inc. when technology supplier PyroGenesis announced its intention to exercise its option to acquire a 50% stake in HSPI in May 2024.

About HPQ

[HPQ Silicon Inc. \(TSX-V: HPQ\)](#) is a Quebec-based TSX Venture Exchange Tier 1 Industrial Issuer.

HPQ is developing, with the support of world-class technology partners [PyroGenesis Canada Inc.](#) and [NOVACIUM SAS](#), new green processes crucial to make the critical materials needed to reach net zero emissions.

HPQ activities are centred around the following four (4) pillars:

- 1) Becoming a green low-cost (Capex and Opex) manufacturer of Fumed Silica using the **FUMED SILICA REACTOR**, a proprietary technology owned by HPQ Silica Polvere Inc being developed for HSPI by PyroGenesis.
- 2) Becoming a producer of silicon-based anode materials for battery applications with the assistance of NOVACIUM SAS.
- 3) HPQ SILICON affiliate NOVACIUM SAS is developing a low carbon, chemical base on demand and high-pressure autonomous hydrogen production system.
- 4) Becoming a zero CO₂ low-cost (Capex and Opex) producer of High Purity Silicon (2N+ to 4N) using our **PUREVAP™ “Quartz Reduction Reactors” (QRR)**, a proprietary technology owned by HPQ being developed for HPQ by PyroGenesis.

For more information, please visit [HPQ Silicon web site](#).

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc., a high-tech company, is a leader in the design, development, manufacture and commercialization of advanced plasma processes and sustainable solutions which reduce greenhouse gases (GHG) and are economically attractive alternatives to conventional “dirty” processes. PyroGenesis has created proprietary, patented, and advanced plasma technologies that are being vetted and adopted by multiple multibillion dollar industry leaders in three massive markets: iron ore pelletization, aluminum, waste management, and additive manufacturing. With a team of experienced engineers, scientists and technicians working out of its Montreal office, and its 3,800 m² and 2,940 m² R&D and manufacturing facilities, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. The operations are ISO 9001:2015 and AS9100D certified, having been ISO certified since 1997. For more information, please visit: www.pyrogenesis.com

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our strategy with respect to research and development, the impact of competitive products and pricing, new product development, and uncertainties related to the regulatory approval process. Such statements reflect the current views of the Company with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Company's ongoing filings with the security's regulatory authorities, which filings can be found at www.sedar.com. Actual results, events, and performance may differ materially. Readers are cautioned not to place undue reliance on these forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward-looking statements either as a result of new information, future events or otherwise, except as required by applicable securities laws.

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Source: HPQ Silicon Inc.

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