Zentek Announces Filing of Provisional Patent for Fire-Retardant Additive

written by Raj Shah | March 28, 2022

March 28, 2022 (Source) – **Zentek Ltd.** ("**Zentek**" or the "**Company**") (NASDAQ:ZTEK; TSX-V:ZEN), a Canadian intellectual property development and commercialization company, has filed a provisional patent with the United States Patent and Trademark Office for an innovative Graphene Oxide-Metal-Organic Framework (GO-MOF) compound for use in fire retardant products. The compound contains only components that are generally considered environmentally friendly, and no solvents or toxic chemicals, as environmental, social and governance continues to be a significant consideration for Zentek. Management of the Company views the manufacturing of the GO-MOF compound as highly scalable and efficient, due to the patent-pending facile synthesis process.

"Our ability to continually innovate new health, safety and sustainability-oriented products based on our deep knowledge of nanomaterials enhances the value proposition of our company," said Greg Fenton, CEO of Zentek. "The success of our initial tests for fire retardants is promising, and we will continue working to bring these products to market."

Zentek's GO-MOF enhanced intumescent coating's performance is highlighted in the demonstration video where one side of a piece of wood was heated with a torch. By increasing the temperature in the coating, the thermal decomposition of the fire-retardant components was initiated. During this thermal decomposition, a portion of fire-retardant components turns to ash, which includes some inert gases. The release of inert gases such as

water (H2O) makes a porous structure for the chars and forces them to be expanded. The expansion of the char makes a barrier between the substrate (wood, in this example) and the flame, limiting heat transfer. While the temperature reached 400 degrees Celsius on the side with flame applied, the temperature only reached 85 degrees Celsius on the opposite side.

Zentek believes its fire-retardant GO-MOF additive could potentially be placed in a variety of coating products, such as latex, epoxies or included in polymers. When integrated into a polymer, it could create a fire-resistant plastic that could be used in electrical vehicles, providing a fire-resistant non-metal casing for the batteries. This would reduce the weight of the casing while still providing significant protection in case of a battery fire.

Watch the video demonstration here.

About Zentek Ltd.

Zentek is an IP development and commercialization company focused on next-gen healthcare solutions in the areas of prevention, detection and treatment. Zentek is currently focused on commercializing Zen**GUARD**™, a patent-pending coating shown to have 99% antimicrobial activity, including against COVID-19, and the potential to use similar compounds as products against infectious diseases. The Company also has an exclusive agreement to be the global exclusive commercializing partner for a newly developed aptamer-based rapid pathogen detection technology.

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To find out more about Zentek Ltd., please visit our website at www.Zentek.com. A copy of this news release and all material documents in respect of the Company may be obtained on ZEN's SEDAR profile at http://www.sedar.com/.

Forward-Looking Statements

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SOURCE: Zentek Ltd.