

ZEN Graphene Solutions Provides Update on Graphene-Based Coating and Filtration Flow Rates

written by Raj Shah | January 13, 2021

January 13, 2021 ([Source](#)) – ZEN Graphene Solutions Ltd. (“ZEN” or the “Company”) (TSX-V:ZEN and OTC:ZENYF) is pleased to announce the following related to its proprietary, graphene-based coating that is 99.9% effective against aerobic bacteria (gram-positive and gram-negative), fungal and viral activity, including COVID-19:

- Confirmation from a major Canadian Certification company that filter material flow rates and pressure drop were not affected by the application of the coating
- Confirmation from The BIG-nano Corporation (BIG-nano) that treated mask material achieved excellent dispersion and coverage, and the coating did not block fiber pores
- Both findings help validate that ZEN’s coating does not inhibit breathability in polypropylene mask material or flow rates in air filtration media

Greg Fenton, ZEN CEO, commented: “Demonstrating that the application of our coating on both filtration and mask materials does not negatively affect the air flow or breathability is another meaningful step towards realizing the full potential of our novel graphene-based solutions. We believe the personal protective equipment (PPE) and air filtration markets have enormous potential for our company as we develop vital tools in

our collective fight against pathogens, like SARS-CoV-2.”

“Looking ahead, we will continue to leverage our position as a nanomaterial solutions provider in areas that will benefit the safety and health of people, and the environment, using our graphene-based coating and potential graphene-based, broad-spectrum, biocidal compound. As a company, we are proud and excited to be contributing toward something that we believe has incredible potential not only for our shareholders, but for society as well. We will immediately begin actively marketing our biocidal coating to these markets.”

Major Certification Company Provides Coated Air Filtration Material Testing Results

The company has received test results from a major Certification Company. The testing was completed on an uncoated filter and the same filter material treated with ZEN’s graphene-based coating in accordance with ASHRAE Standard 52.2, an industry accepted procedure for measuring filter efficiency. Both filters had a minimum efficiency reporting value (MERV) of 5, similar to a common, medium-quality filter. These findings confirmed that there was very little effect on air flow and pressure drop when the filter was treated with ZEN’s graphene-based coating compared to the untreated filter. This is another key step for the company in demonstrating the practical and widely usable application of its graphene-based, biocidal coating in the filtration and protective mask markets.

This major Canadian Certification company has further confirmed that there are no established testing protocols for coatings with biocidal activity in the Heating, Ventillation and Air Conditioning (HVAC) industry. Hence, no certification is required other than an understanding of the impact of a coating on air flow and pressure drop. Since ZEN’s coating has shown no effects on these parameters, the company will now immediately

move to commercialize its coating in the HVAC industry.

The BIG-nano Graphene-Coated Meltblown Polypropylene Testing
The company also received test results from Dr. Abolfazl Mohebbi, VP of Innovation, at Waterloo, Ontario-based BIG-nano, for ZEN's proprietary, graphene-based coating on BIG-nano's meltblown polypropylene (MB-PP). This material is commonly used in protective masks where ZEN's coating will be applied. High-resolution scanning electron microscope (SEM) images revealed that the coating adhered to the MB-PP sample very well, achieving a consistent particle dispersion and distribution. Most importantly, the coating did not block fiber pores, preserving a high level of breathability, a key factor to ensure that ZEN can bring masks coated with its biocidal formulation to market. The SEM images are available here: [SEM Images](#)

Dr. Mohebbi commented: "During my academic experiences, I received many coated samples or related papers to review and evaluate, and this coating was one of the best coatings I have ever seen. I wanted to demonstrate how good these coatings are by capturing them on [SEM](#) images."

Disclaimer: The Company is not making any express or implied claims that its product can eliminate, cure, or contain the COVID-19 virus (or SARS-2 Coronavirus) at this time.

About ZEN Graphene Solutions Ltd.

ZEN is a graphene technology solutions company with a focus on the development of graphene-based nanomaterial products and applications. The unique Albany Graphite Project provides the company with a potential competitive advantage in the graphene market. Labs in Japan, UK, Israel, USA, and Canada have independently demonstrated that ZEN's Albany Pure™ Graphite is an ideal precursor material that easily converts (exfoliates) to graphene, using a variety of mechanical, chemical, and

electrochemical methods. ZEN is focused on commercializing a patent pending graphene-based coating with 99% viricidal activity against COVID-19.

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To find out more about ZEN Graphene Solutions Ltd., please visit our website at www.ZENGraphene.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 www.sedar.ca.

Forward-Looking Statements

This news release contains forward-looking statements. Since forward-looking statements address future events and conditions, by their very nature they involve inherent risks and uncertainties. Although ZEN believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information, which only applies as of the date of this news release, and no assurance can be given that such events will occur in the disclosed time frames or at all. ZEN disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.