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GRAPHENE LEADERS CANADA INC.
DEVELOPS DISRUPTIVE GLC+ PROTECTIVE COATING

EDMONTON, AB, April 6, 2017 – Graphene Leaders Canada (GLC) Inc. is pleased to announce their new coating development of graphene-enhanced **GLC+ Electroless Nickel (EN) Coating for Metal Surfaces** which demonstrates industry-changing results in wear-abrasion and corrosion resistance and improved hardness and lubricity properties.

In current technology, electroless nickel coatings provide excellent corrosion resistance and can be heat treated to improve hardness and wear resistance, although at the expense of the corrosion resistant behavior. These improvements to the performance are at the expense of the porosity of the coating, limiting applications in corrosive or chemically demanding environments which generates a significant gap.

The **GLC+ Electroless Nickel (EN) Coating for Metal Surfaces** is a solution to bridge the technological gap through our successful incorporation of pristine graphene into electroless nickel coatings. In recent years, graphene has attracted great scientific attention due to its remarkable properties including high strength elasticity, chemical inertness, lubricity, as well as high electrical and thermal conductivity. The successful co-deposition of graphene demonstrates a significant impact on the properties of the EN composite coating, showing marked improvements in a number of measured physical properties, such as hardness and wear-abrasion. Additionally, the dense lattice of graphene makes it impermeable to moisture and gas, making it an invaluable additive to aid in the inhibition of corrosion. This coating provides improved hardness and corrosion resistance, allowing for larger range of uses, or the application of a single coating for a wide variety of conditions.

Results of the coatings have demonstrated an improvement to hardness of greater than 60% and improvements to wear-abrasion-corrosion resistance of greater than 30%. These industry changing results are now being used as our starting point for greater optimization of the deposition conditions to begin next phase of our development of the coating focused towards commercialization. Our next phase targets are to further improve the hardness while rendering the coating chemically inert. GLC is in discussions with both national and international clients and industry partner's in progressing this disruptive coating further towards commercialization.

Commenting on the GLC+ Protective Coating, Donna Mandau, President & CEO for Graphene Leaders Canada said:

“The development of a *GLC+ Protective Coating* with noticeably improved hardness and wear-abrasion-corrosion resistance will allow automotive, mining, pipeline, aerospace, military and other industries to have a competitive advantage for improved product solutions. The GLC + protective coating also serves as a positive solution to environmental impact and solves many costly issues across multiple sectors. This project has demonstrated GLC’s graphene knowledge and materials science expertise and the technical leads are now looking to take this technology forward to achieve even better performance results than already achieved so far.”

GLC believes that additions of graphene to develop a GLC+ Protective Coating, along with further optimization will surpass the properties of hard chrome, the current gold standard in coatings. Improvements are expected in several areas of performance, including hardness and resistance to wear, coupled with the added benefit of enhanced corrosion resistance. These improvements will result in longer lifetimes under aggressive operating conditions (high temp, high salinity, high abrasion, High H₂S) minimizing maintenance costs and lost production related to downtime.

About Graphene Leaders Canada Inc.

Graphene Leaders Canada (GLC) Inc. is a private Alberta technology company producing high quality, high purity graphene nanomaterials which function as a platform technology with the ability to add value across numerous applications. GLC is focused to work with industry to develop solutions by integrating the graphene to develop new innovative products. GLC is focused in the environment-water and coatings markets. GLC’s tag line is “***Making Great Products Even Greater***”.

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If you would like more information about this topic, please contact Donna Mandau at [Graphene Leaders Canada \(GLC\) Inc.](#) or email at solutions@glcplus.com.