

**NBD Nano Introduces RepelShell™ Additive Solution  
for Highly Repellent Plastic Surfaces**

*First in line of injection-grade additives that deliver thermal stability  
and high surface performance for plastics*

**Boston, Mass. – February 28, 2017** – [NBD Nanotechnologies](#), the surface “wettability” experts, today introduced the first in its line of RepelShell™ products – an injection-grade additive that makes plastic surfaces highly repellent to water, dirt, mud, and ice. Immediate applications for NBD’s patented RepelShell™ for Plastics include mud- and water-resistant athletic footwear, anti-stain electronics, self-cleaning non-woven fibers, and anti-stain textiles.

[Wettability](#) reflects the degree of liquid interaction – involving water, oil, dirt, and chemicals – on the surface of products made of glass, metal, plastic, or paint. Manufacturers widely use coatings or additives to enhance or reduce the wettability – i.e., the surface properties – of their products. By precisely altering a product’s wettability, NBD Nano solutions dramatically enhance a product’s characteristics and value.

The core technology behind the NBD Nano RepelShell™ is a patented polymer blend formulation that combines highly functionalized molecules that are drop-in additives during plastic compounding. NBD’s hybrid molecule combines organic and inorganic elements that provide highly desirable structural and thermal properties.

NBD Nano RepelShell™ for Plastic has consumer applications that include athletic clothing, footwear, and electronic materials. In addition, industrial plastics used in energy, automotive, architecture, manufacturing, and technology could benefit from the addition of NBD Nano RepelShell™. NBD’s material takes any plastic and transforms it into a highly repellent and functional surface.

“NBD Nano RepelShell™ is unlike any solution on the market because it delivers thermal stability and high surface performance through an injection-grade solution that gets added directly to the plastic,” said Deckard Sorensen, President at NBD Nano. “Imagine a professional soccer star playing on a super-muddy pitch – if the bottoms of the player’s cleats have RepelShell™ for Plastic, they will remain permanently and completely mud-free.”

NBD’s RepelShell™ for Plastic is a nanostructured chemical that is added to plastics in a powder form to create extraordinary hydrophobic and oleophobic properties. The result is a plastic that retains all of its intended mechanical properties – while also gaining extreme water and oil repellency at the surface. NBD Nano RepelShell™ only requires low-weight loadings that provide an overall cost-effective solution.

“Given the low surface energy of our molecule, the NBD plastic additive rises to the surface and results in an embedded solution that is distributed at the molecular level and highly miscible with the host resin, resulting in permanent performance without the fear of wearing or leaching off over time” said Sorensen. “The NBD additive provides end-product properties that are simply not possible with existing coatings or plastics.”

### **About NBD Nanotechnologies**

NBD Nanotechnologies is the only company to create coatings and additives that: provide tailored surface ‘wettability’ solutions and are both durable and adaptive. No other wettability solution lasts a long time and integrates seamlessly with existing production processes while making the surfaces of glass, metal, plastics, and paint products extremely repellent to water, dirt, oil, and chemicals.

Based in Boston, Massachusetts, NBD Nano has a proven team of top scientists and experienced entrepreneurs leading its business and research operations.

NBD Nano’s proprietary nanotechnology platform, and its expanding IP portfolio, enables the creation of customized coatings and additives for any application, on any substrate, with unprecedented durability and adaptability. <http://nbdnano.com>

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#### **Contact:**

Jay Staunton  
Skibereen Consulting  
jay@skibereen.com  
(781) 790-6023