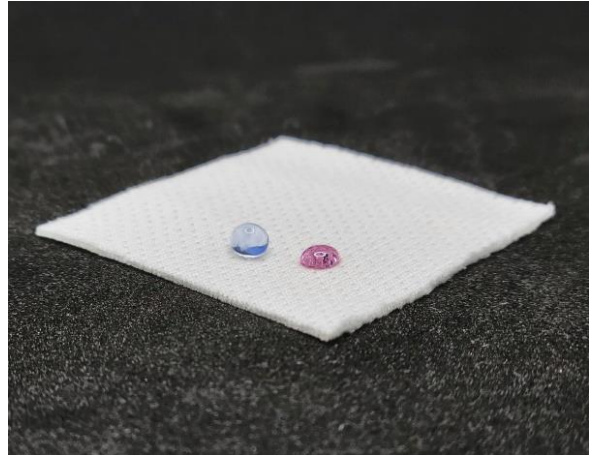


Amphiphobic Coatings – PFAS Free

Description

Coatings containing AQM's silica nanomaterials for enhanced properties. Properties demonstrated range from Durable Water Resistance (DWR), oil repellency, UV blocking, conductivity, dye doping, anti-bacterial, and much more. Compatible with a variety of surfaces (polyester, nylon, PET-modacrylic, glass, etc.) Custom properties are available upon request.



Product Advantages

- Free of per- and polyfluoroalkyl substances (PFAS)
- Nano and micro structuring for improved surface properties
- Easily tailorable for different coating application methods or desired properties
- Variable solvents depending on requirements

Product Specifications

Property	Description
Forms Provided	Concentrated (10-50 wt%) or diluted (1-5 wt%) solutions
Particle Size	Silica nano and microparticles ranging from 10 nm to > 1 μm
Compatible Solvents	Polar solvents (<i>e.g.</i> , water, ethanol, <i>etc.</i>)
Application Methods	Dip coating, padding, spray coating, <i>etc.</i>
Formulation	Silicone-based polymer with silica particles
Modifications	Hydrophobic, hydrophilic, oleophobic, oleophilic, <i>etc.</i>
Contact Angles	Water contact angles (WCA) > 130° Oil contact angles (OCA) (diiodomethane) > 70°
Crystallinity	None; Amorphous materials

Packaging

Sold in plastic bottles in varying volumes and forms. Bulk quantities are available upon request.

Characterization Data

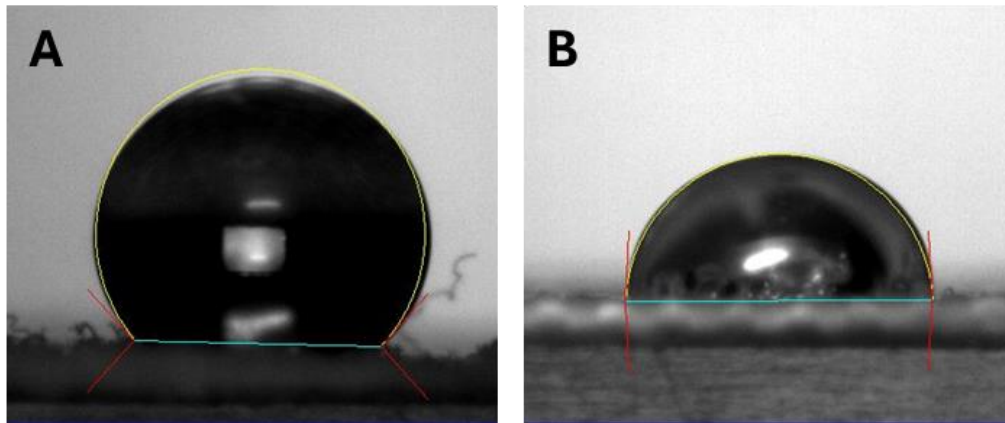


Figure 1. Contact angle measurements of DWR coating on polyester: A) water and B) oil.

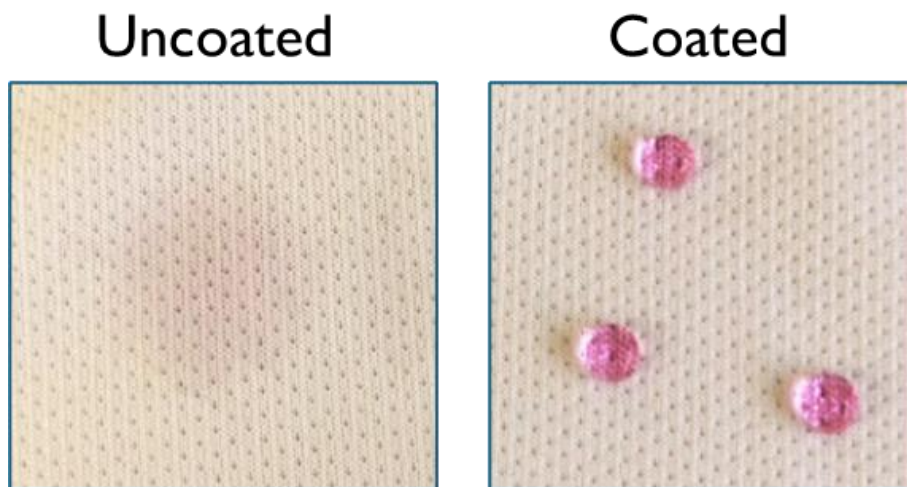


Figure 2. Example of stain resistance (dyed water) on uncoated and DWR coated polyester.

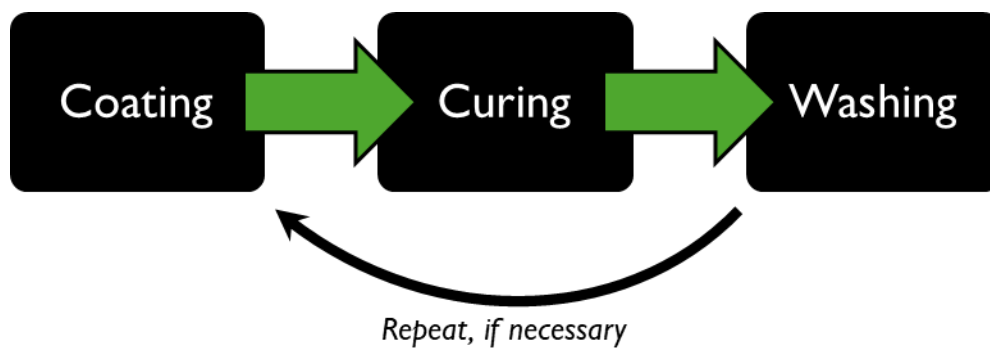


Figure 3. Typical coating procedure for nano coatings.