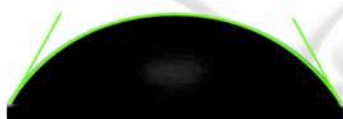


# Hybrid Plastics®

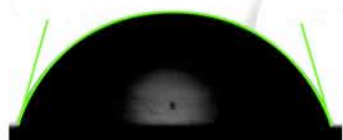
Superior Technology for Superior Products

## MS0825 Nanoreinforced® Nylon 6

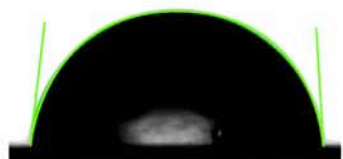
Nanoreinforced® nylon utilizes POSS® technology to achieve increased hydrophobicity, increased oil resistance, improved toughness and easier processability through structural control at the nanometer level. POSS®'s nanoscopic size, dispersion, and chemical structure lead to these enhancements which can be realized in any grade of nylon.



Neat Nylon 6 - 61°



3% MS0825 - 73°



10% MS0825 - 83°

Water contact angle measurements of MS0825 nylon 6

### ENHANCED HYDROPHOBICITY

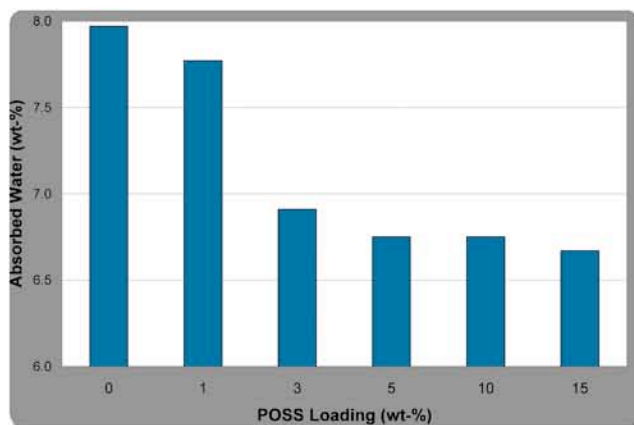
The hydrophobic properties of POSS® synergistically combines with nylon's morphology to create a nano-rough surface that is both hydrophobic and low friction. The technique is ideally suited to masterbatching. These water contact angle images demonstrate the differences for nylon and Nanoreinforced® nylon. Water contact angle increases with POSS® content, and follows standard rules of mixing when let down from a masterbatch. Hydrophobicity enhancements lead to improved durability as well due to reduced hydrolytic degradation.

### FASTER PROCESSING

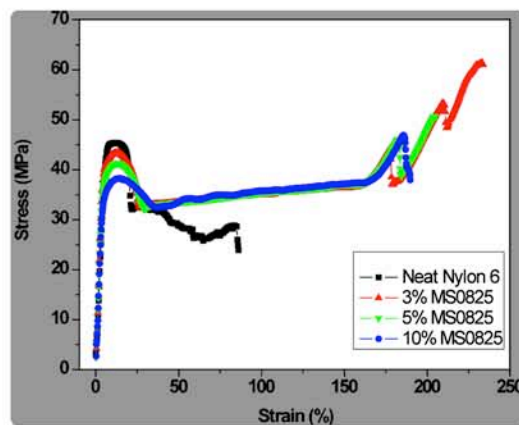
The lubricity effect that is imparted by the POSS® increases melt flow and decreases the screw torque required during compounding and during masterbatch let down.

### INCREASED TOUGHNESS

Even at low loading, POSS® provides nano-scale reinforcement. Mechanical characteristics are maintained or improved compared to that of the base nylon resin grade.



Comparative water saturation level.



Tensile test results of Nanoreinforced® nylon

### SUGGESTED APPLICATIONS

Nanoreinforced® nylon has uses in textiles, packaging, film and fiber applications. It is available as 10 wt-% masterbatches. Custom compounding is also available.

### WARRANTY

The information contained herein is believed to be accurate and reliable. However, the user is responsible for determining the suitability and use of the final formulations/products. Hybrid Plastics® warrants that its products will meet specifications, but not merchantability or fitness for use.

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