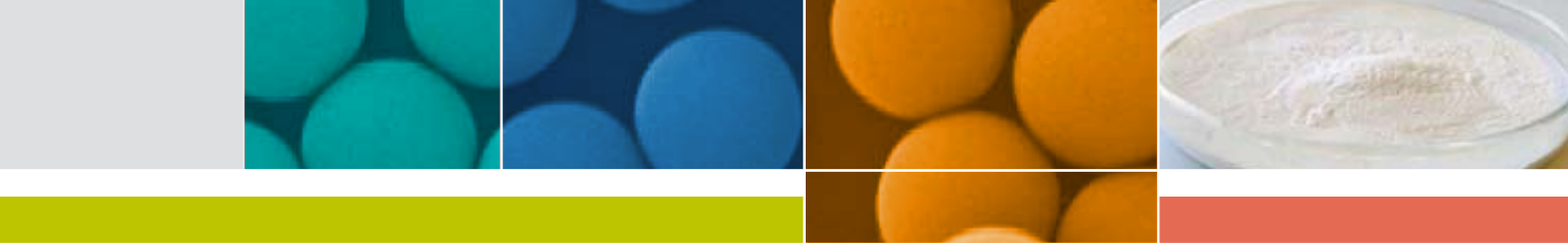




CoatOSil*
Durable Slipping Agent Microspheres
to Enhance Coatings



CoatOSil* Durable Slipping Agent Microspheres to Enhance Coatings

What are DSA Microspheres?

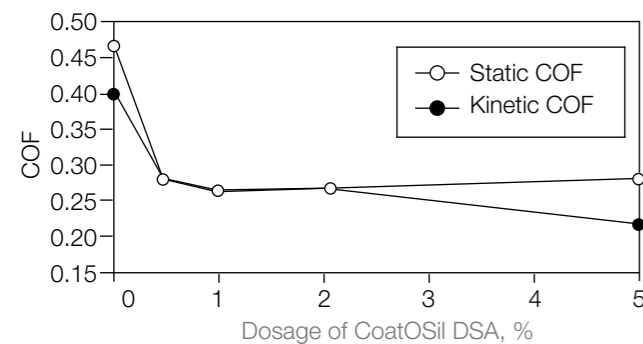
- Spherical silicone resin particles with 3D network
- Unique, narrow size distribution
- Chemically inert, thermally stable, resistant to solvents

Why Add DSA Microsphere to your coating?



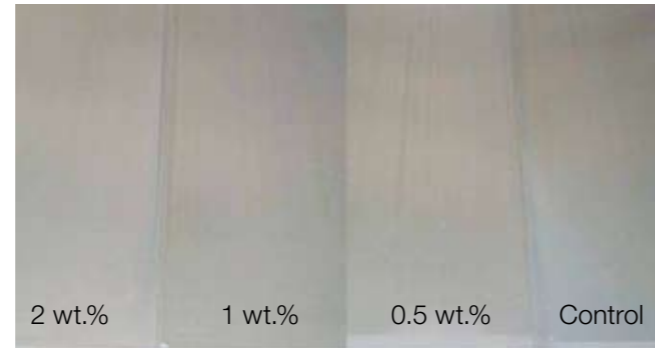
- Increase slip (anti-blocking)
- Improve wear resistance performance
- Provide soft-feel characteristics
- Provide a matte effect

...with Significant Reduction of COF

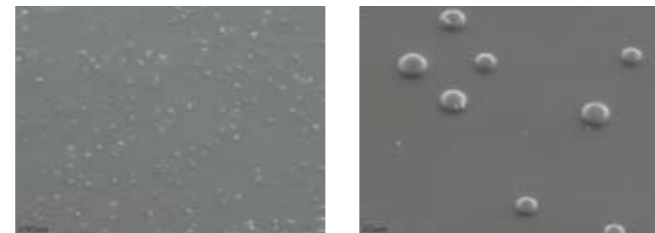


Increased slip (anti-blocking); effective at 0.5% loading;
Soft, smooth and silky coating feel

...and No change in Coating Appearance

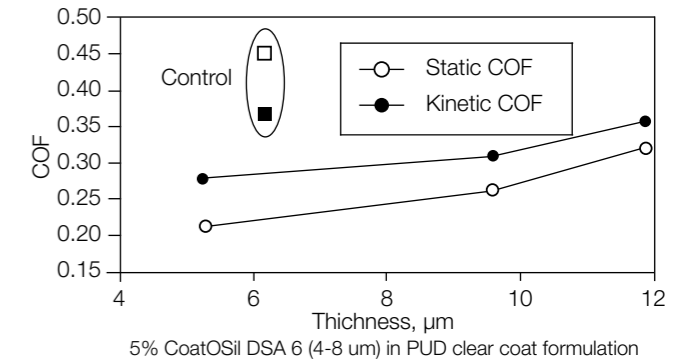


...Uniform Distribution of Particles...



- CoatOSil DSA 6, 1 Wt.% in polyurethane dispersion, SEM micrographs at 100x, 1000x and 10000x magnification
- Particles imbedded into the coating

Coating Thickness
Should Not Exceed
the CoatOSil*
DSA Microsphere
Size, for Maximum
Efficacy



Formulation and Application Details

- Water, coalescing agent, and CoatOSil DSA mixed until homogenous
- Waterborne PUD or acrylic latex mixed in with the resulting slurry
- Coatings applied by drawdown, curing at 120 °C for 20 minutes
- Coefficients of friction (COF) measured by Slip and Friction Tester

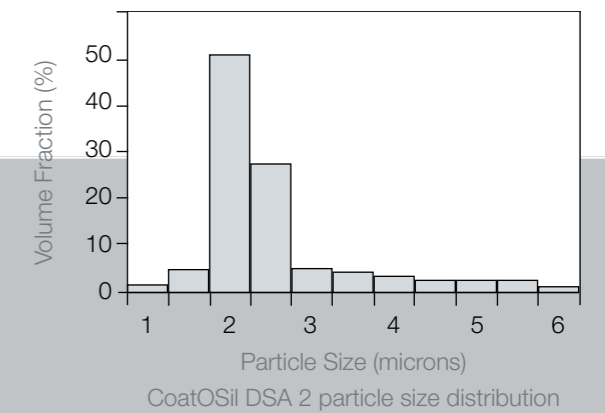
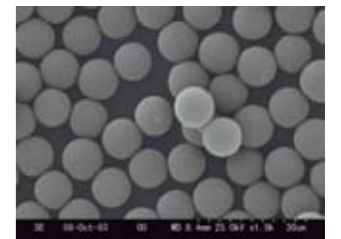
Ingredients	Parts/Wt. %
2-(2-Butoxyethoxy)ethanol	3
Distilled Water	6
CoatOSil DSA 6	1
Vinyl-Acrylic Latex	90

Ingredients	Parts/Wt. %
2-(2-Butoxyethoxy)ethanol	2
Distilled Water	3
CoatOSil DSA 6	1
Waterborne PUD	94

... Available in a Variety of Grades

Grade	DSA 6	DSA 10
Appearance	Fine White Powder	
Average Particle Size, μm	4~8	10
Water Content (105 °C, 60min)	≤ 1%	≤ 1%
pH (2% in MeOH/ H ₂ O)	7	7
Specific Gravity (25 °C)	1.32	1.32
Bulk Density	0.44	0.67
Specific Surface Area, m ² /g	20	18

With Unique Narrow Particle Size Distribution



Summary

- 50% reduction of friction coefficient
- Uniform distribution of particles
- Particles are surface-imbedded
- Low loading of DSA is sufficient

Key Features

- Good anti-blocking property
- Improved wear resistance
- Soft, silky feel
- Reduced glare, matte finish

Customer Service Centers

Worldwide Hotline

T +1 800 295 2392 / +1 607 786 8131
F +1 607 786 8309

North America

cs-na.silicones@momentive.com

Silicones – Fluids, UA, Silianes, Specialty Coatings, RTV and Elastomers

T +1 800 523 5862 / +1 800 334 4674
F +1 304 746 1654 / +1 304 746 1623

Consumer Sealants/ Construction Sealants and Adhesives

T +1 877 943 7325
F +1 304 746 1654

Latin America

cs-la.silicones@momentive.com

South America

T +55 11 4534 9650
F +55 11 4534 9660

Mexico and Central America

T +52 55 2169 7670
F +52 55 2169 7699

Europe, Middle East, Africa and India

cs-eur.silicones@momentive.com
T +00 800 4321 1000 / +40 21 3111848

Pacific

cs-ap.silicones@momentive.com

China

T +800 820 0202 / +86 21 3860 4892

Japan

T +0120 975 400 / +81 276 20 6182
F +81 276 31 6259

Korea

T +82 2 6201 4600
F +82 2 6201 4601

Malaysia

T +60 3 9206 1555
F +60 3 9206 1533

Thailand

T +66 2207 3456
F +66 2207 3488

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MOMENTIVE™

22 Corporate Woods Boulevard
Albany, NY 12211 USA

+1 800 295 2392
+1 607 786 8131
momentive.com

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