



Consumer Solutions

Use DOWSIL™ 52 Additive to Customize Slip and Improve Scratch and Abrasion Resistance



Enhance Current Key Wood Coatings Benefits



Get Wood Coating Advantages that Can Set You Apart from the Competition

Whether used alone or with your current wax emulsions, DOWSIL™ 52 Additive gives you the unique advantage of customizing your slip to precise levels while improving current coatings benefits. Ultimately, DOWSIL™ 52 Additive gives you the advantage of formulating a host of waterborne wood coatings that can significantly differentiate your products in the marketplace with a wide range of desirable benefits, including but not limited to:

- Customizable slip
- Improved scratch and abrasion resistance
- Improved sandability
- Enhanced anti-blocking
- Good recoatability
- Good hand feel

Fine-tune Slip and Improve Scratch and Abrasion Resistance

Discover how to manufacture high-performance paints and wood coatings with DOWSIL™ 52 Additive. Dial in slip and significantly improve many of your current formulations.

DOWSIL™ 52 Additive, an ultra-high, molecular weight silicone dispersion, does what few waterborne wood coating additives can do. And it does it at very low addition levels, which contributes to more cost-effective formulations.

Obtaining customizable slip and improving scratch and abrasion resistance in waterborne coatings – with no impact to current key mechanical attributes – has been a difficult goal to attain. DOWSIL™ 52 Additive aims to change the way you think about surface modification and enhancement.

Maximize Your Wood Coating Advantages

- Customizable slip performance
- Effective alone or with wax emulsions
- No impact on mechanical properties
- Enhanced scratch and abrasion resistance
- Provides sandability, recoatability and anti-blocking
- Use in interior and exterior coatings
- Compatible with multiple formulations
- Easy incorporation and dispersion
- Highly effective at low addition levels
- Good hand feel

Avoid Negatively Affecting Current Key Properties

Incorporating too much or too little of any additive can cause negative impacts on current benefits. When it comes to positively impacting coatings benefits, DOWSIL™ 52 Additive can do a lot. When it comes to negatively impacting benefits, there's a lot our additive won't do.

- Will not negatively impact surface hardness
- Will not negatively impact water resistance
- Will not impact intercoat adhesion
- Will not decrease recoatability

Combine Good Compatibility and Ease of Incorporation

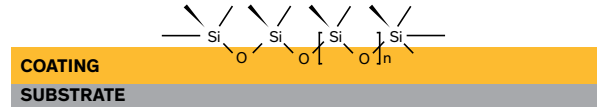
DOWSIL™ 52 Additive can significantly widen your application opportunities because it is suitable for use in industrial wood coatings, wood trim, inks, overprint varnishes and interior/

exterior paints. Our additive offers compatibility in a range of coatings formulations, such as:

- Acrylic
- Polyurethane
- Epoxy
- Polyester
- Vinyl-based resin systems

Along with improved overall benefits and low addition costs, the low viscosity of DOWSIL™ 52 Additive allows for easy incorporation into waterborne formulations during the let-down or post-additive manufacturing stages.

How Silicones Work

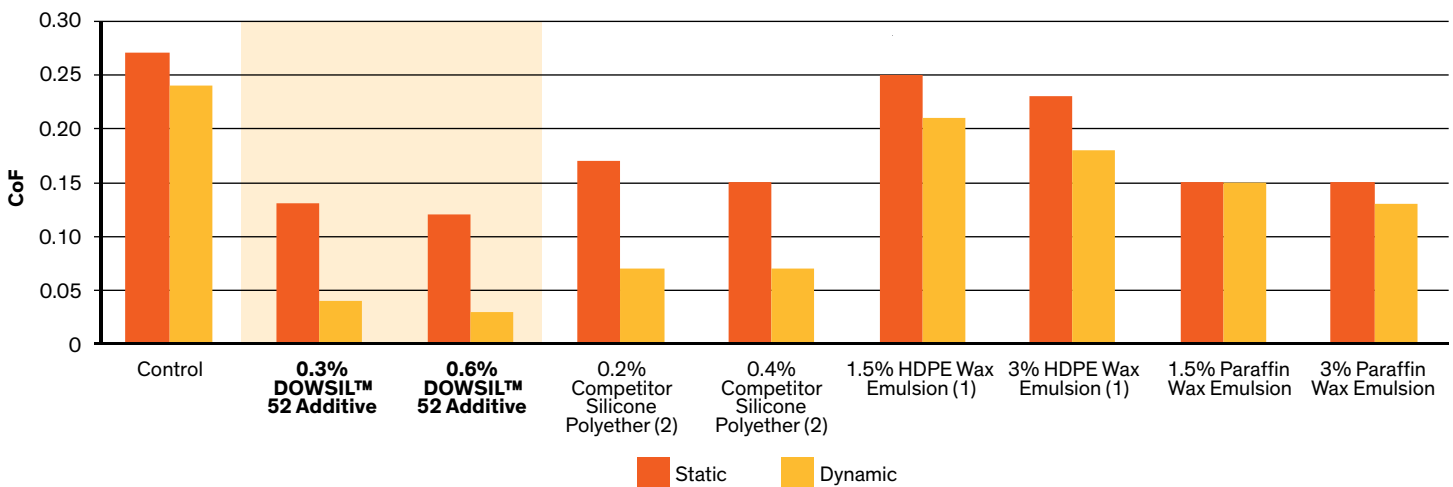


Silicones have low surface tension and therefore orient to the air/polymer interface, which forms a very thin lubricating layer on the coating surface to reduce the coefficient of friction.

Get Better Slip

External tests show that DOWSIL™ 52 Additive has the lowest coefficient of friction values versus competitive silicone polyethers and wax emulsions.

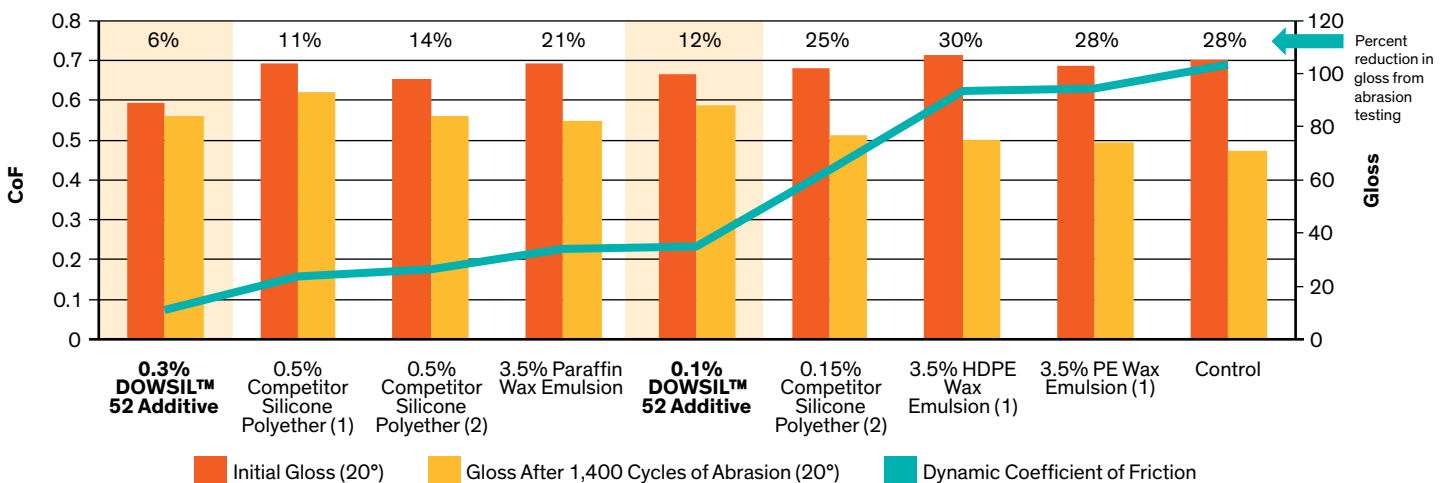
Figure 1. Static and Dynamic Coefficient of Friction: WB Wood Coating



Obtain Better Abrasion Resistance and Slip than Competitive Additives

Results for abrasion resistance and slip show DOWSIL™ 52 Additive, at a very low 0.5% addition level, significantly outperforms wax additives.

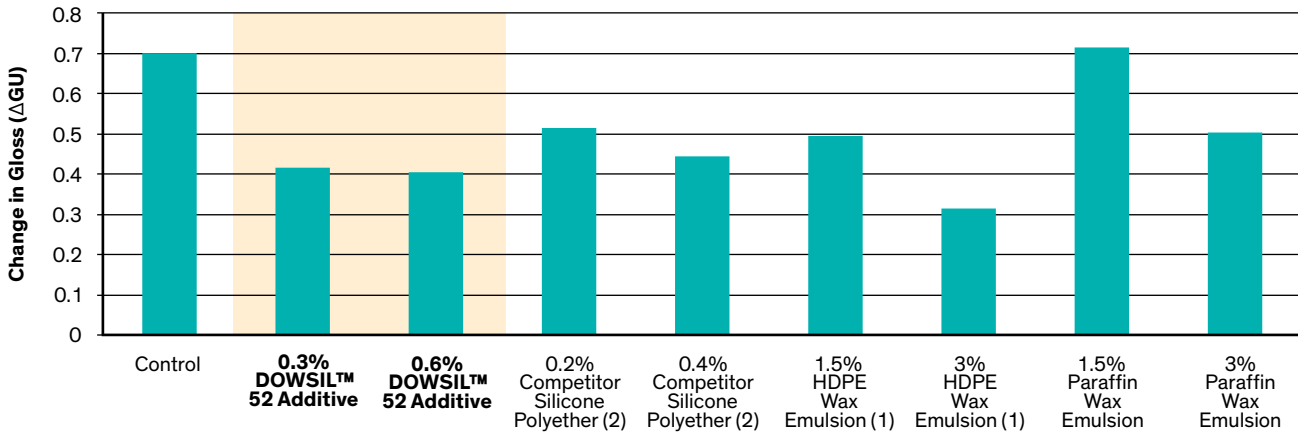
Figure 2. Abrasion Resistance and Slip: WB Acrylic Wood Coating



Achieve Enhanced Scratch Resistance at Various Addition Levels

At 0.3% and 0.6% addition rates, DOWSIL™ 52 Additive performed very well against silicone polyethers and wax emulsions. The difference in gloss before and after Quartant abrasion testing was used to determine the scratch resistance.

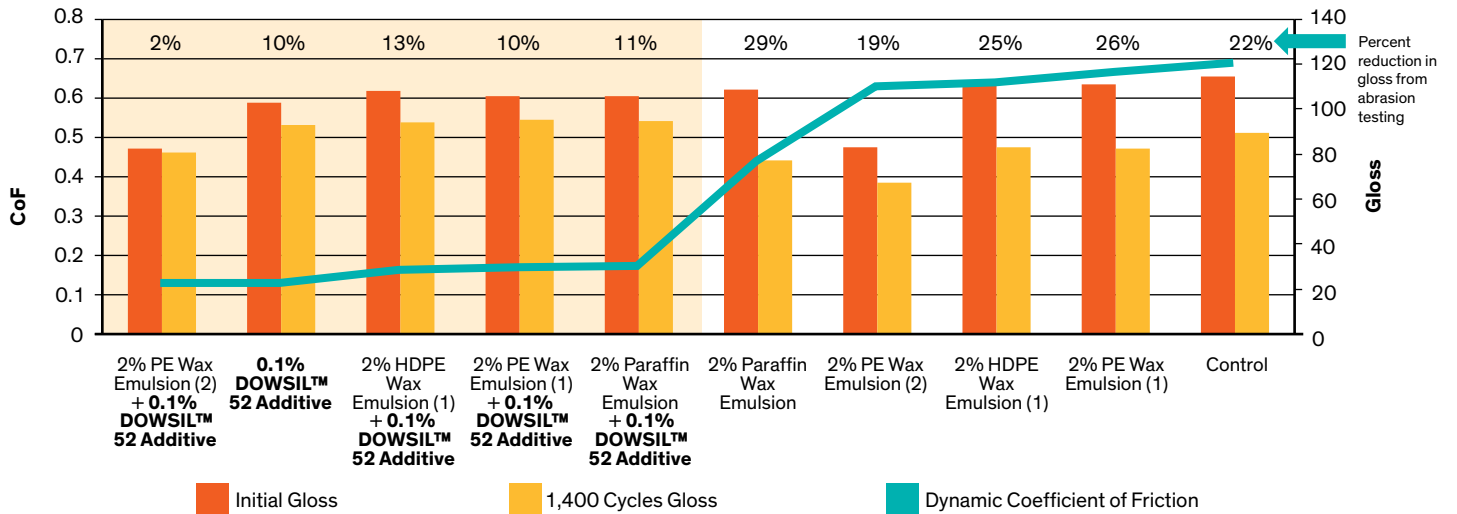
Figure 3. Scratch Resistance: WB Wood Coating



Improve Abrasion Resistance and Slip in Formulations Containing Wax Emulsions

Adding just 0.1% DOWSIL™ 52 Additive to a 2% wax emulsion level showed a significant improvement in abrasion resistance and slip over samples containing only wax emulsions.

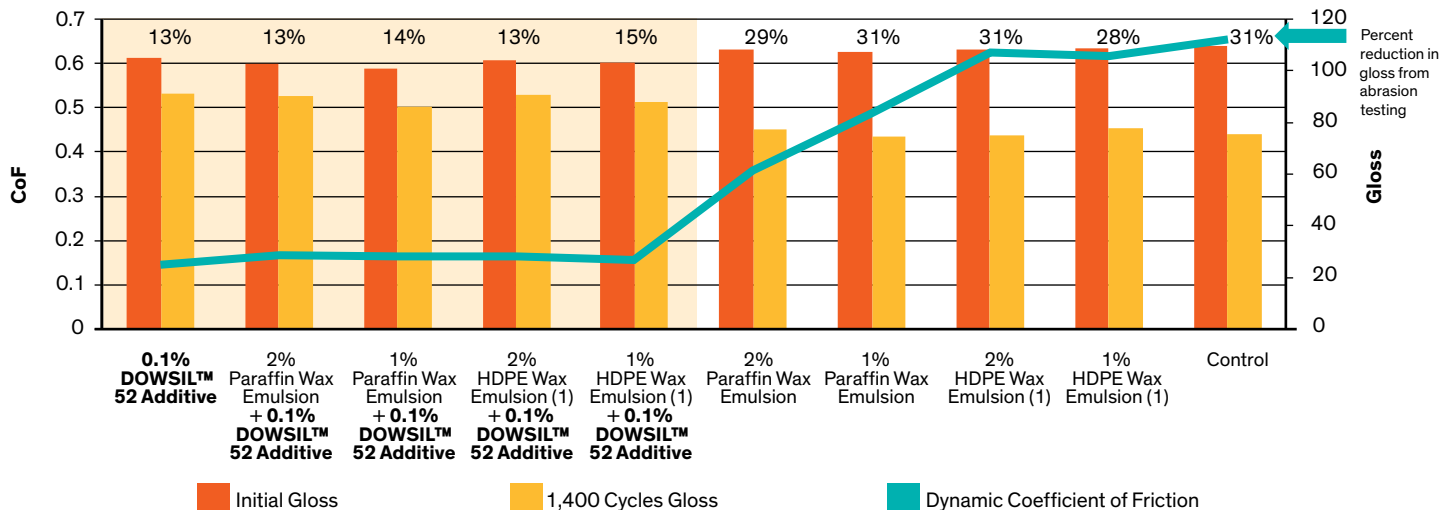
Figure 4. Abrasion Resistance and Slip: DOWSIL™ 52 Additive in Combination with Wax Emulsions



Discover Better Cost-in-use Savings When Used Alone or with Wax Emulsion

Including just 0.1% DOWSIL™ 52 Additive to both 1% and 2% wax emulsion levels showed significant improvement in abrasion resistance and slip over the samples containing only the wax emulsion at either level, which can result in significant cost-in-use savings.

Figure 5. Cost-in-Use: Combination



More Than Additives

Our innovative, silicon-based enabling technologies can help you infuse your products with high-value performance attributes that will give you a competitive advantage in the marketplace. As a leader and innovator with a long history of success in the industry, Dow's performance-enhancing coating technology platforms are well-aligned to the needs of the increasingly competitive global coatings market. Consider adding the following enabling technologies to improve your products' performance and support your business goals:

- Customizable slip
- Feel and touch
- Scratch resistance
- Impact deadening
- Water and UV resistance
- Gloss enhancement
- Heat and temperature resistance

For More Information

For more information and to order a sample of DOWSIL™ 52 Additive to test in your coating formulations, contact us today. Visit consumer.dow.com to learn how Dow's innovative coatings additives can help you power up your product line. And power up opportunity.

Packaging Options

DOWSIL™ 52 Additive is packaged in the following options:

- 1,070 kg IBC
- 190 kg drum
- 18 kg pail
- Sample bottle (120 ml)

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Form No. 26-1909-01 C