



April 2026

REVOLUTIONIZING SURFACE FINISHES

The Next Generation of Multi-Functional Additives

DISCLAIMER

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LEARNING OBJECTIVES

- Explore top considerations for choosing additives
- Understand the limitations of traditional silica-based matting agents
- Learn about the latest additive technologies
- Solstice's NduroMatt™ multi-functional additives



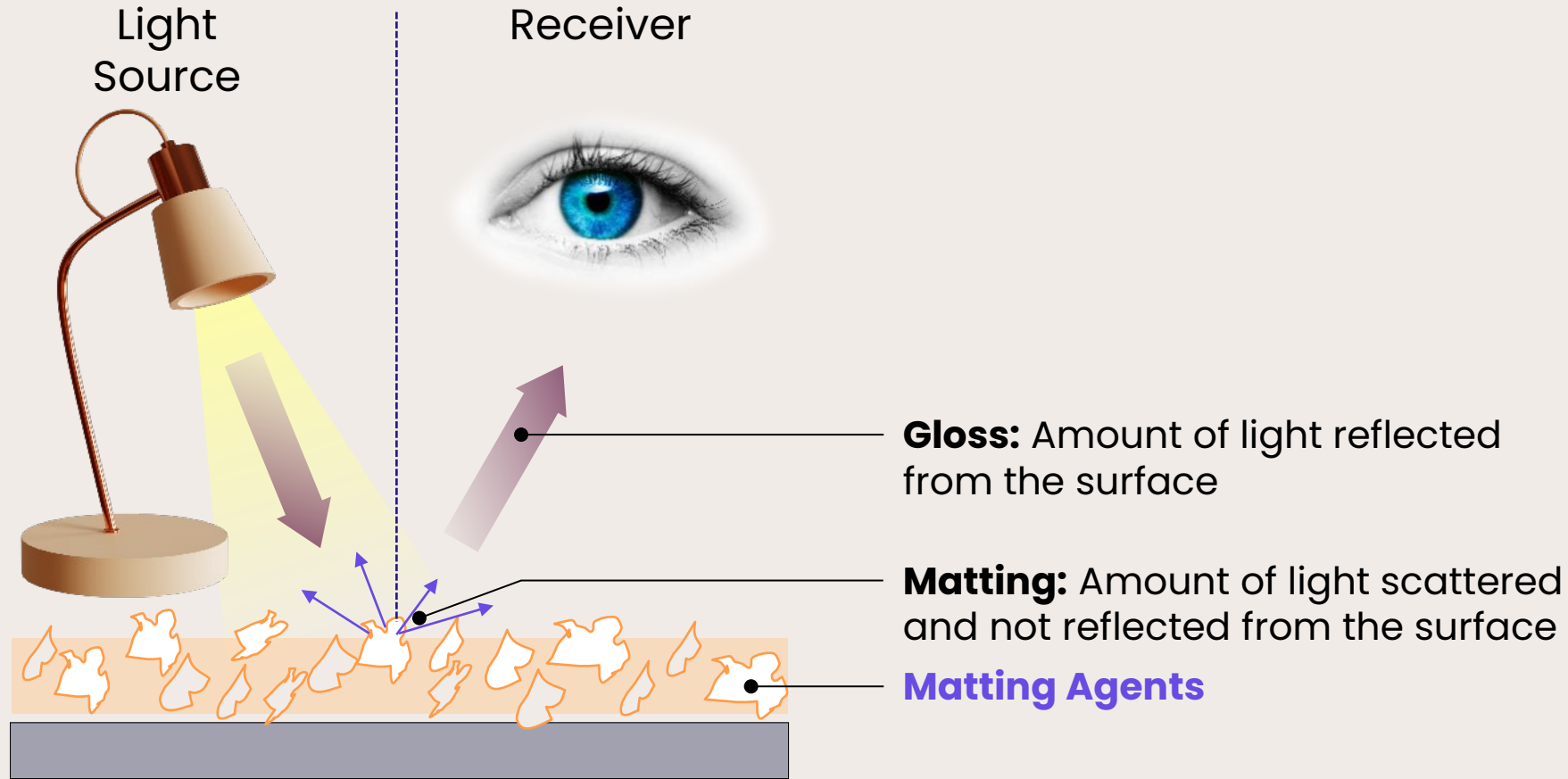
TOP CONSIDERATIONS FOR CHOOSING ADDITIVES

- Achieving desired performance characteristics
- Compatibility with the paint formulation
- The type of paint being used (water-based or oil-based)
- The substrate being coated
- The desired color or appearance
- Ease of use
- Cost-effectiveness



Quality and performance that meet the specifications

APPEARANCE AND GLOSS



The coating film has initial gloss – Matting Agents will reduce that gloss to desired level

LIMITATIONS OF TRADITIONAL SILICA-BASED MATTING AGENTS

- Burnishing (defined as the undesirable increase in gloss after rubbing)
- Poor scuff, mar, scratch & abrasion resistance
- Poor surface slip and feel
- Loss of efficiency with “aging in can”
- Tendency to precipitate in storage (settling) and to drive up viscosity
- High binder demand leads to weaker paint film
- Fracturable and friable (i.e., they can be broken down with agitation and destroyed)
- Inadequate stain resistance
- Limited incorporation flexibility
- Insufficient dirt pick-up resistance



Traditional silica-based matting agents deliver efficient matting but come with several limitations

SOLSTICE'S MULTI-FUNCTIONAL ADDITIVES

- Preference for a matte finish in the furniture and decorative segments are growing at an accelerated pace globally
- Consumers also require longevity and durability
- Silica-based matting agents make paints susceptible to mar, rub, burnish, and scratch, negatively impacting longevity and durability
- Matting agents from Solstice provide 2-3 times better surface property performance and better matting efficiency at the same dosage levels
 - 3 different products covering wide range of functional attributes in fine white Micronized Powder form



PROPERTIES ENHANCED BY SOLSTICE'S MULTI-FUNCTIONAL ADDITIVES



In Paint
Manufacturing

- Ease of dispersion, even the ability to post add
- Less dust generation
- Less viscosity build



In Use

- Efficient and more durable Gloss Reduction
- Improved surface properties: Mar, Abrasion, Rub, Color Transfer, Scratch & Burnish
- Improved Stain Resistance



In Storage

- Better anti-settling & shelf stability

Performance Benefits Throughout the Paint Life Cycle

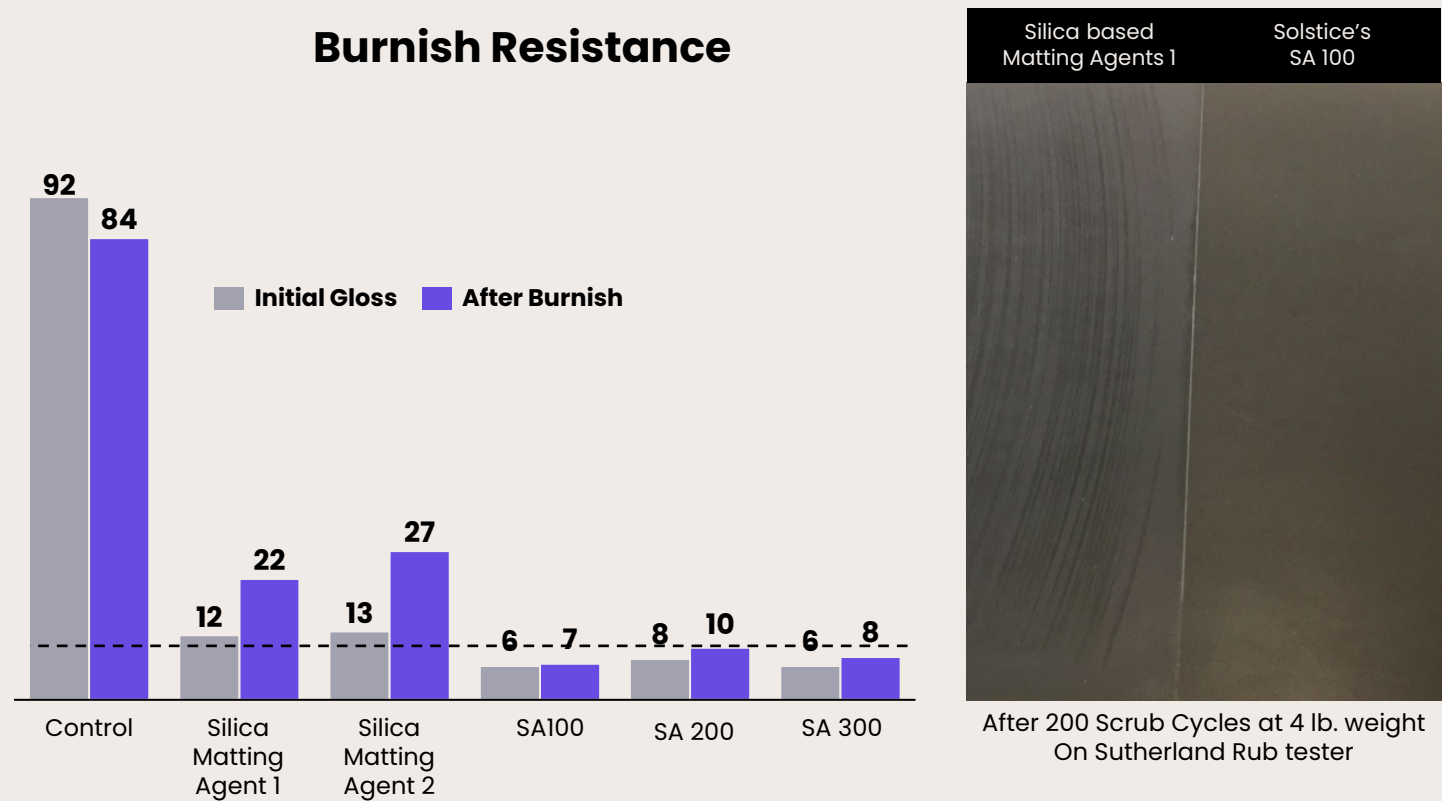
3 MATTING AGENT PRODUCTS COVER A WIDE RANGE OF FUNCTIONAL ATTRIBUTES

	Incorporation Flexibility	Dispersion Ease		Dust Generation	Foaming	Friability	Maintain Viscosity	Matting Efficiency	Burnish Resistance	Scrub Resistance	Rub/Mar Resistance	Storage Stability
		Water-borne	Solvent-borne									
NduroMatt™ 100	++	+	++	+	+	++	++	=	+	+	+	+
NduroMatt™ 200	++	+	++	+	+	++	++	=	++	++	++	+
NduroMatt™ 300	++	++	+	+	+	++	++	=	++	++	++	+

- = is equal to silica
- + slightly better than silica
- ++ significantly better than silica
- *All data based on Solstice and partner’s internal analysis

ADVANTAGES OF SOLSTICE NDUROMATT™ OVER SILICA

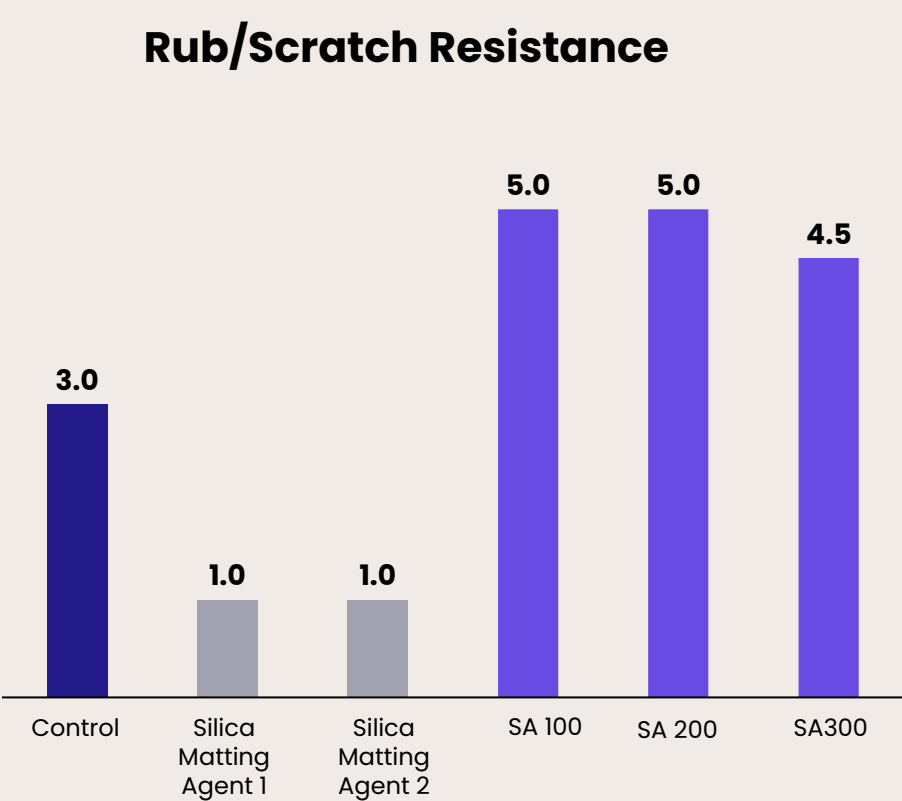
Burnish Resistance



- 1. Gloss readings are at 85° Gloss Angle
- 2. --- 85° Gloss reading of fully matted coating

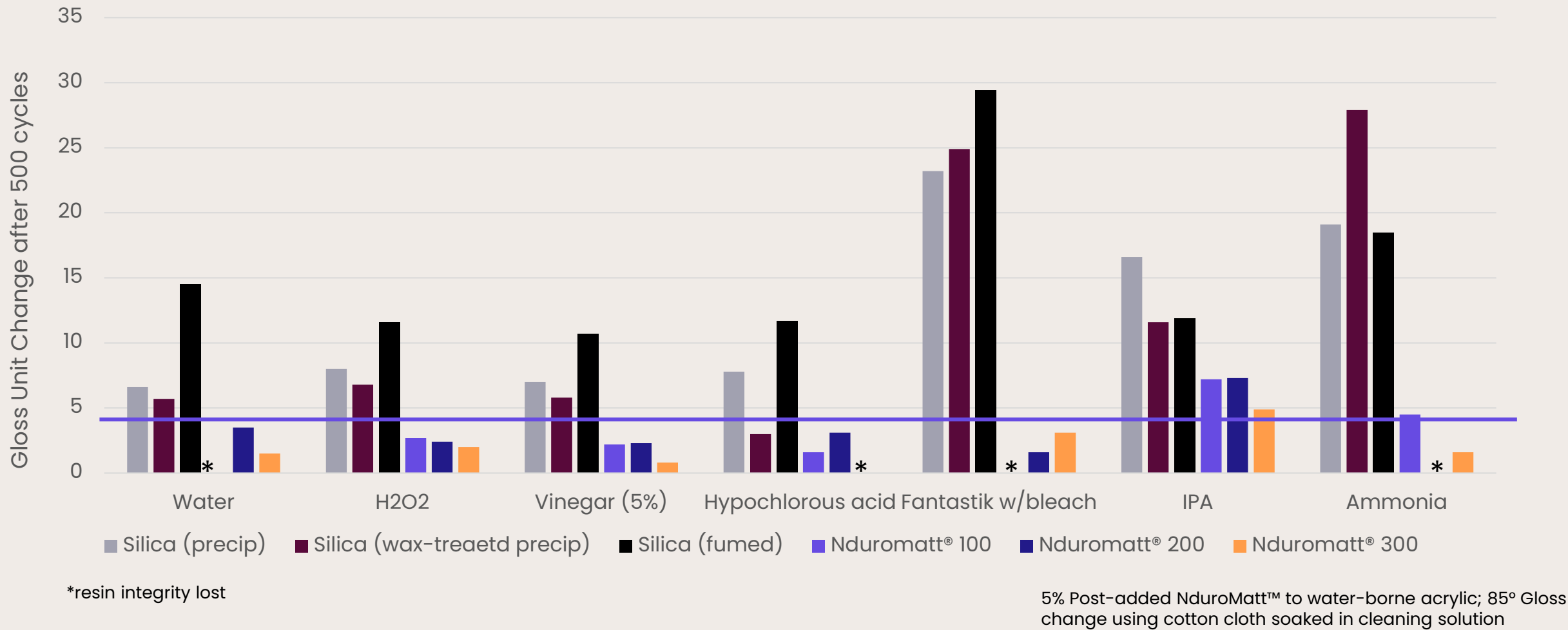
*Results shown here are for water-based clear acrylics with all Matting Agents post added at 5% w/w

Rub/Scratch Resistance



- 1. Rating on the scale of 1 to 5 where 5 represents no visible damage and 1 represents high level of surface damage after Sutherland Rub test.

ENDURABILITY OF MATTE FINISH – POST 500 CYCLES



NduroMatt™ imparts 2-3X more durable matting vs conventional additives

HOW DOES SOLSTICE NDUROMATT™ BOOST URFACE PROPERTIES?



Low Oil Absorption:

Less binder demand to wet out particles, frees up binder to form a more superior paint film



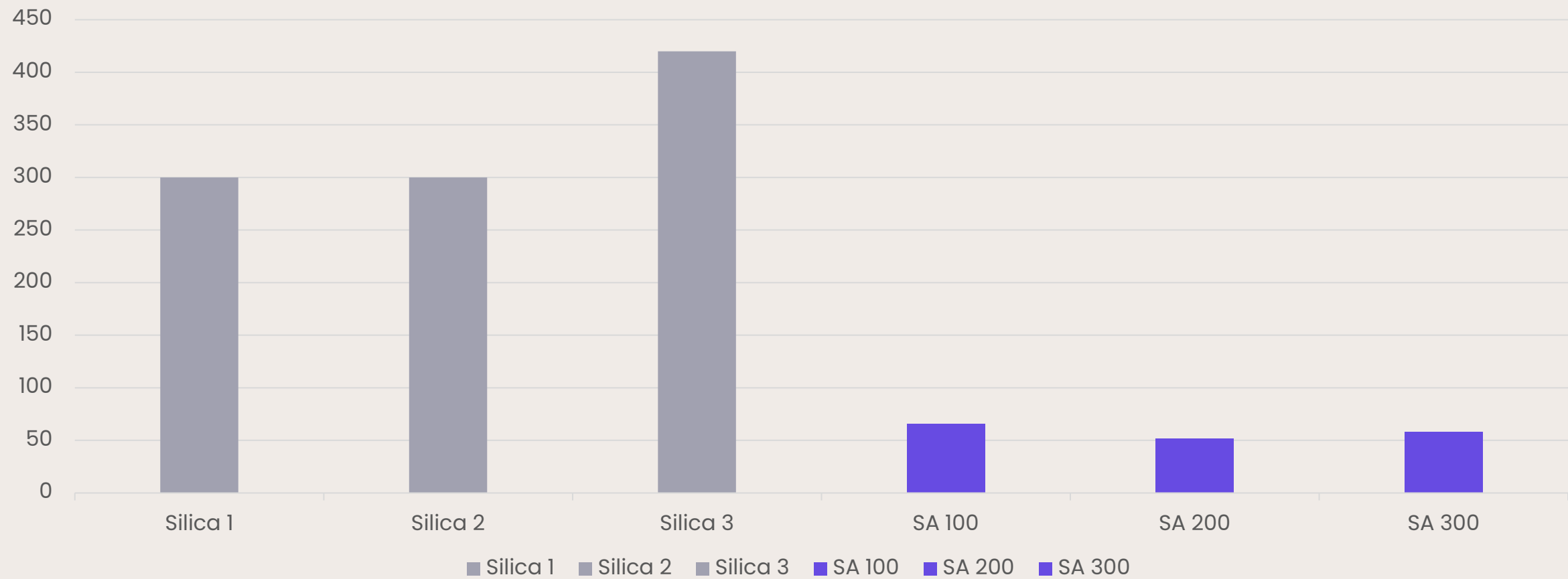
NduroMatt™ particles are **not fracturable and friable**, maintaining surface performance and gloss



Polyethylene based particles lower the COF of the substrate, **lowering surface damage**

Three major advantages over silica!

OIL ABSORPTION



NduroMatt™ absorbs less oil and hence improves coating efficiency

CLARITY (GRAY SCALE)

**Matted using
NduroMatt™**



L* Gray Scale Measurement = 28.4

**Matted using
Synthetic Silicas**



L* Gray Scale Measurement = 42.3

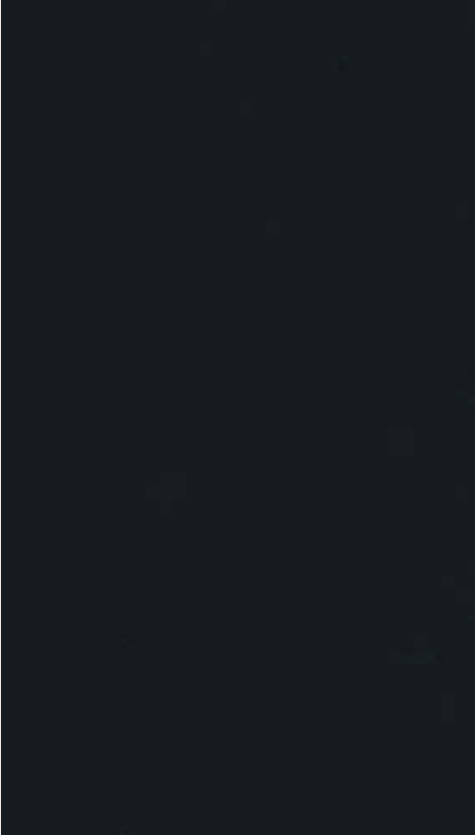
Test Conditions: Clear coating is drawdown on a black background and then the Gray Scale is measured on a Spectrophotometer

Test Coating: Clear Aqueous Acrylic Coating

NduroMatt™ has higher clarity in clear coatings than silicas

RUB/MAR RESISTANCE

**Matted using
NduroMatt™**



Visual Rub Rating = 5

**Matted using
Synthetic Silicas**



Visual Rub Rating = 1

Test Conditions: Sutherland Rub Tester, 200
Cycles with an additional 4lb weight
Note: Rub Resistance Scale: Visual Rating 1 – 5
(1 = Worst, 5 = Best)

Test Coating: Clear Aqueous Acrylic Coating

More Mar & Abrasion Resistance in Clear, Aqueous Acrylic Coatings

BURNISH RESISTANCE

**Matted using
NduroMatt™**



85° Gloss Increase: ~ 1 unit (10% Inc)

**Matted using
Synthetic Silicas**



85° Gloss Increase: ~ 14 units (100% Inc)

Test Conditions: BYK Gardner Abrasion/Scrub Tester,
Cheese Cloth Pad, 500 Cycles

Test Coating: Clear Aqueous Acrylic Coating

More Burnish Resistance in Clear, Aqueous Acrylic Coatings

BURNISH RESISTANCE

**Matted using
NduroMatt™ 100**



Color Change Units = 2.2

**Matted using
Synthetic Silicas**



Color Change Units = 3.9

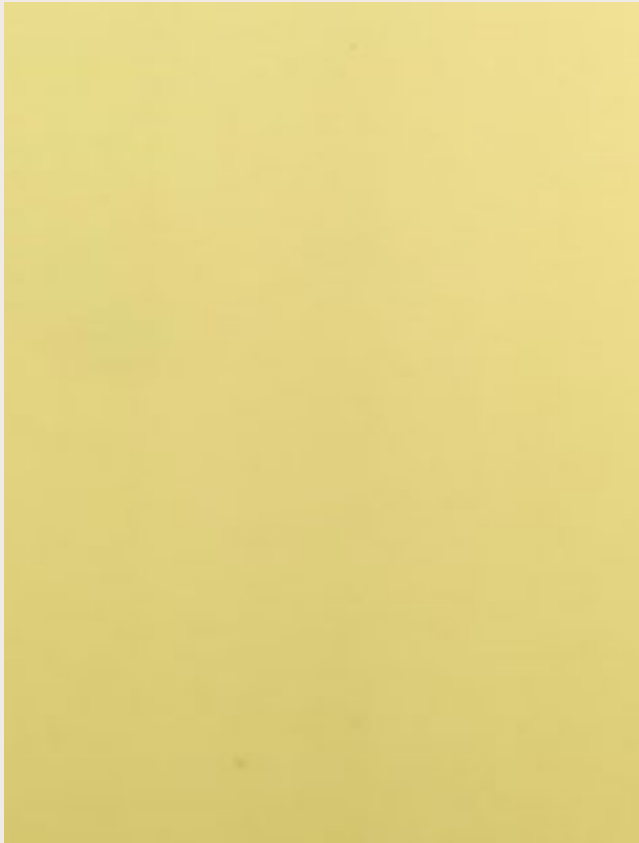
Test Conditions: Clear coating applied over a white background. Tea applied and allowed to stand on the sample for 30 minutes. Sample is then scrubbed on Byk-Gardner Abrasion tester using a sponge attachment and surfactant. Color Unit Change is measured on the L*a*b* scale to determine the ΔE .

Test Coating: Clear Aqueous Acrylic Coating

NduroMatt™ picks up less stain than silicas

BURNISH RESISTANCE

**Matted using
NduroMatt™**



85° Gloss Increase: < 3 units

**Matted using
Synthetic Silicas**



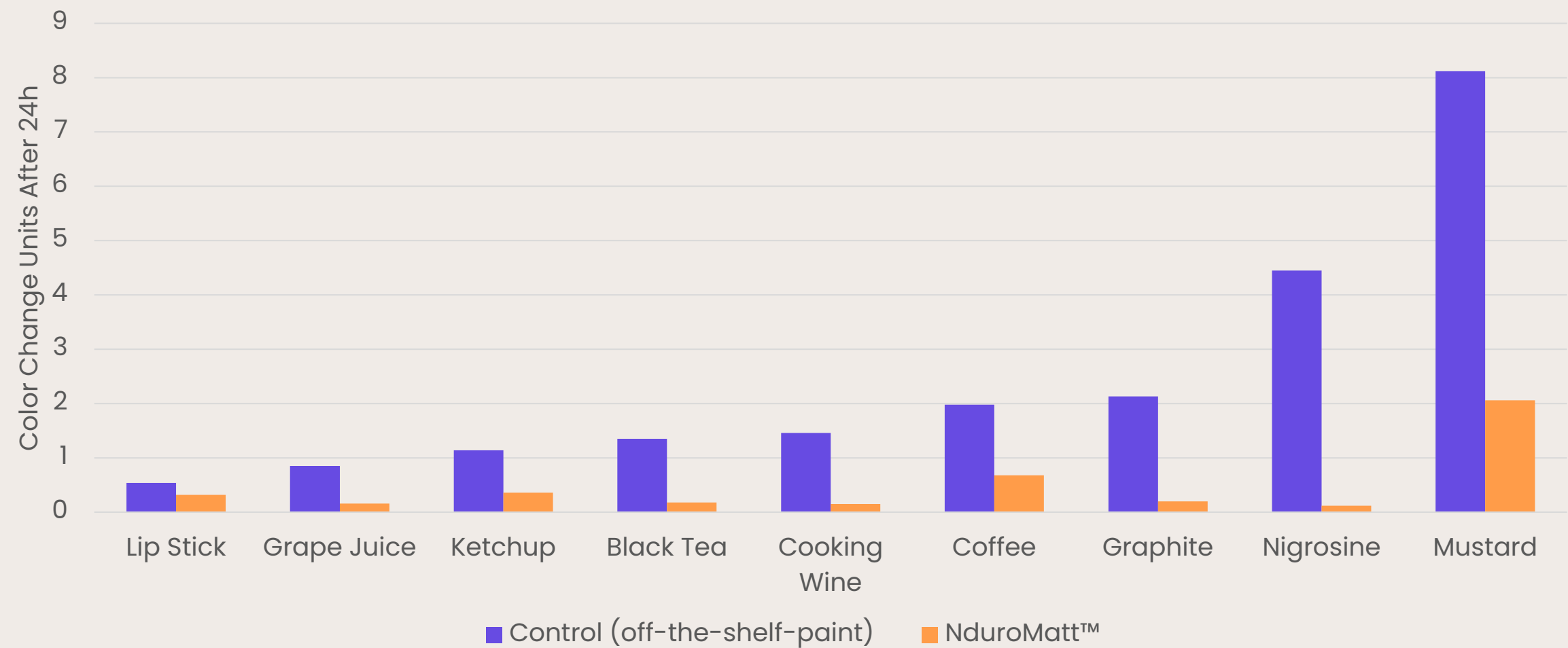
85° Gloss Increase: ~ 15 units

MPI Test Conditions: BYK Gardner
Abrasion/Scrub Tester,
Rayon Cloth Pad, 250 Cycles w an additional
500 grams of weight added to the sled

Test Coating: Aqueous, Pigmented
Architectural Coating

More Burnish Resistance in Pigmented Architectural Coatings

NDUROMATT™ – STAIN RESISTANCE



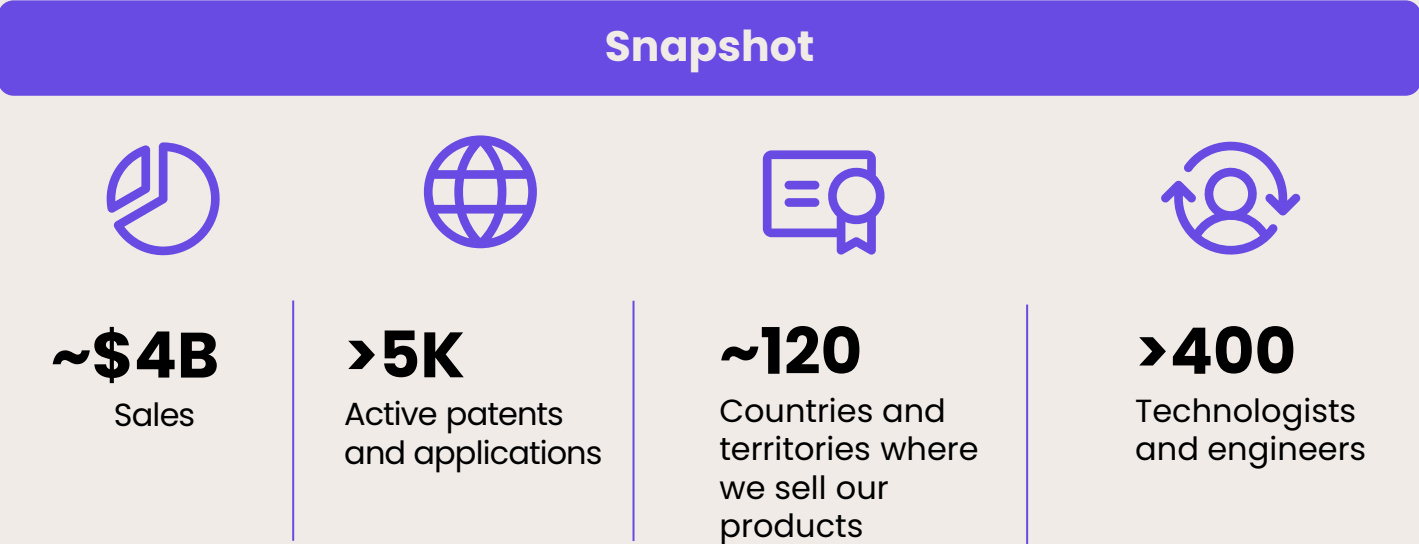
NduroMatt™ resists the staining of even off-the-shelf paints

ABOUT SOLSTICE SPECIALTY ADDITIVES

ABOUT SOLSTICE ADVANCED MATERIALS

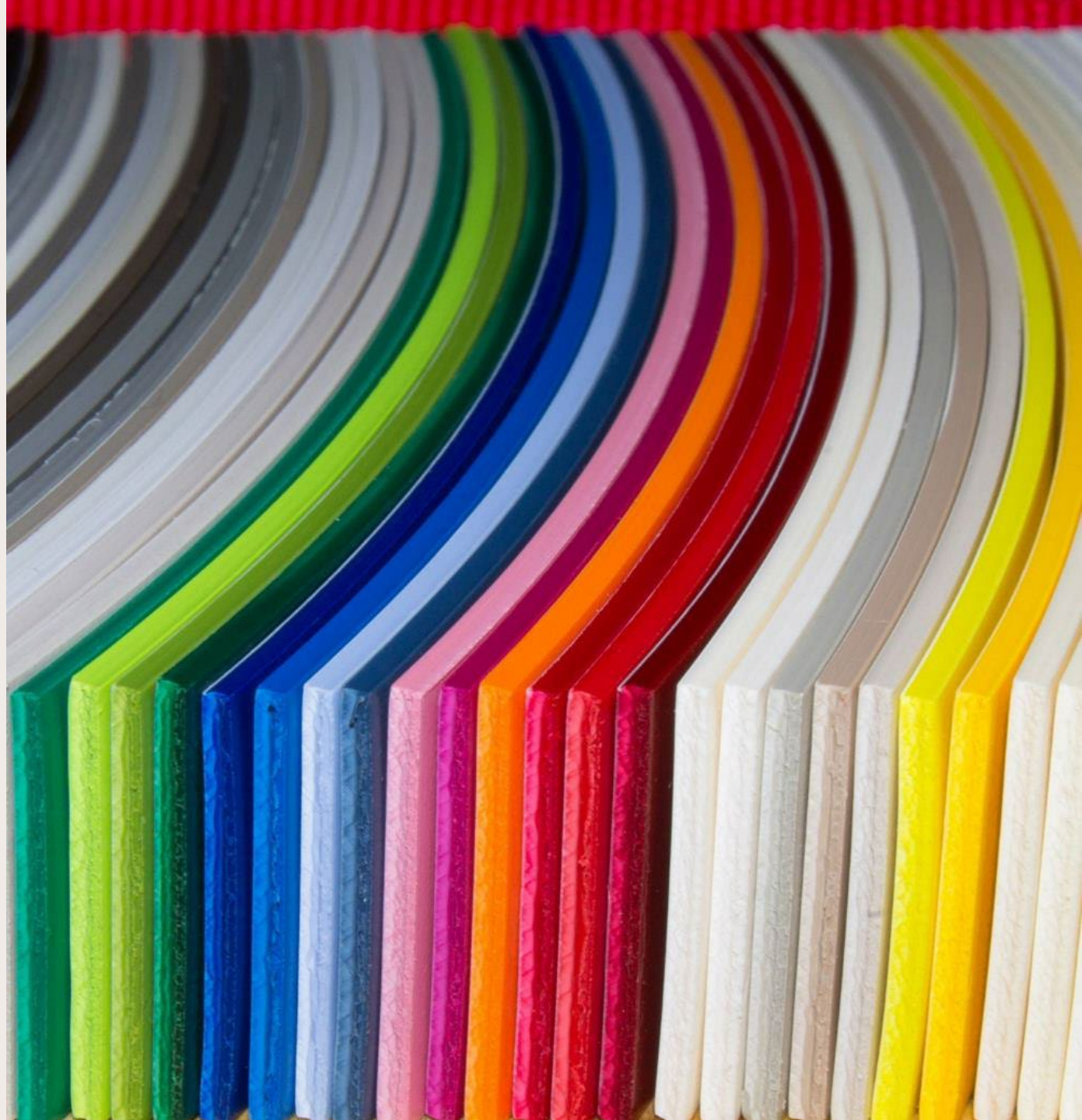
Solstice Advanced Materials is a sustainability-focused specialty chemicals and materials business with leading positions across fluorine products, electronic materials, industrial grade fibers, and healthcare packaging solutions.

- Built on 100+ years of innovation.
- High-performance, customer-focused solutions for critical applications.
- Trusted global partner with proven scale and reliability.



WHAT ARE SOLSTICE SPECIALTY ADDITIVES?

- Broad range of low-molecular weight polymers
- Customized lubricants for PVC applications
- Formulation oriented
- Delivers high-impact on process and product performance at low-use levels
- Improved cost performance
- Minimally intrusive on current processes and product



SPECIALTY ADDITIVES | OVERVIEW

Low molecular weight polyolefin-based additives for adhesives, paints, coatings, asphalt, PVC and plastic

In addition to NduroMatt™ multi-functional additives, we also offer the following range of additives:

A-C® Performance Products

- Homopolymers; PE, PP
- Oxidized waxes; PE, EVA
- Copolymers; EVAs, EAAs, MAPOs
- Ionomers

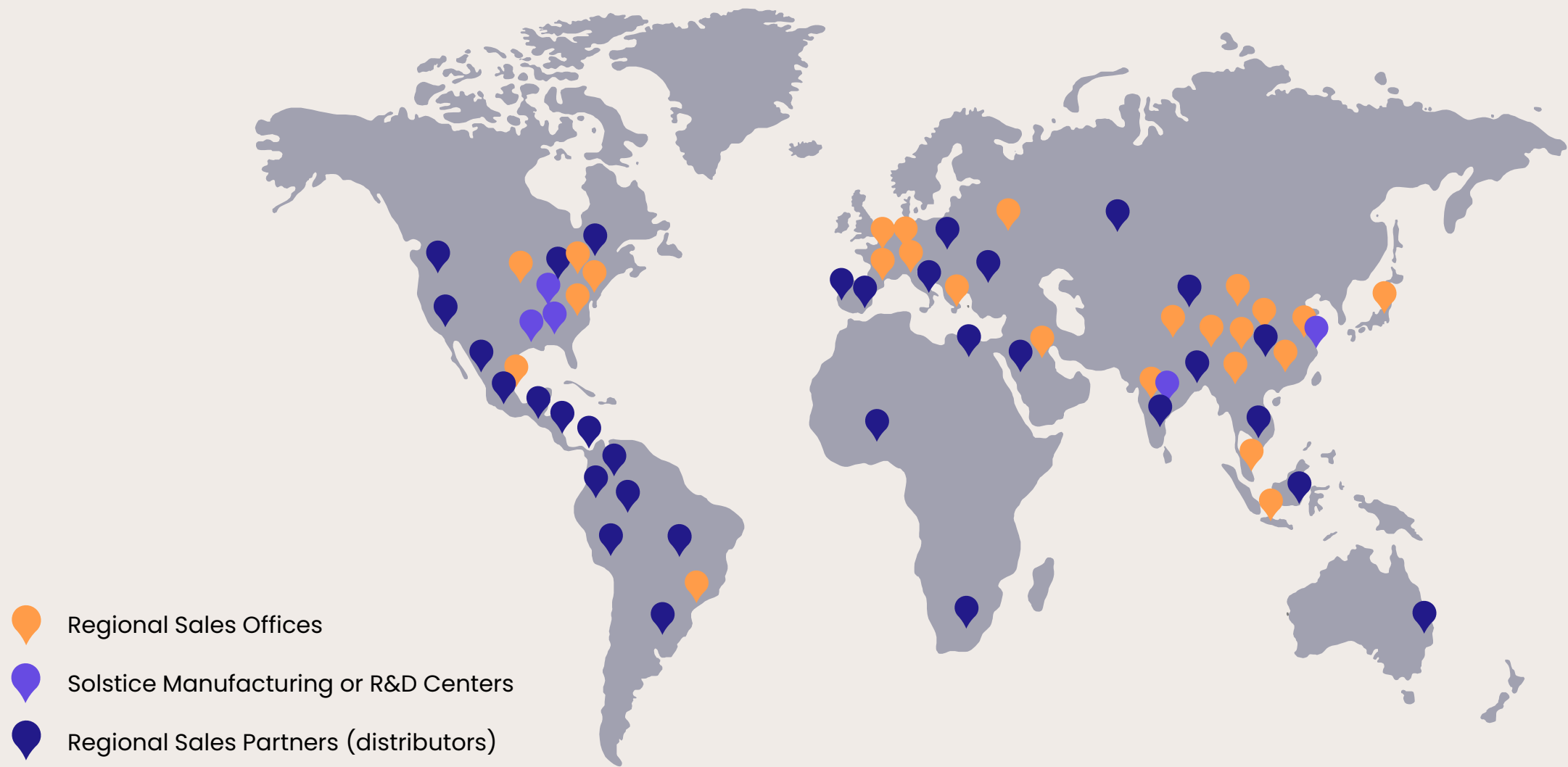
Rheochem®

High-Performance Lubricants

- Paraffin blends
- Specialty blends
- Customized blends

Application Areas	Performance Improvements	
Adhesives, Coatings, Inks	• Improve mar and scratch resistance • Control viscosity and settling • Improve adhesion to difficult substrates • Improve melting point and set-time adhesives	
Plastic Processing Aids	• Improve throughput of PVC extrusion • Enhance dispersion of pigments and reduce overall pigment loading • Enhance physical properties of resin	
Asphalt	• Reduce paving temperatures • Reduce emission of harmful gases • Increase energy efficiency • Paving process optimization • Extend paving season	

SPECIALTY ADDITIVES | GLOBAL FOOTPRINT



THANK YOU!

LEARN MORE:

