

SILICATE MINERAL STAIN

A UNIQUE MINERAL SILICATE COLOR STAIN FOR USE ON ALL TYPES OF CONCRETE SURFACES

PRODUCT DESCRIPTION

NuHue's Silicate Mineral Stain penetrates and forms covalent and permanent bonds within the concrete and provides unlimited color potential from completely solid and opaque finishes to veils of translucent color without masking the raw face of the concrete surface. It is extremely vapor permeable and will not fade. For use on vertical concrete surfaces where the original texture and raw appearance of the concrete is desired, but added color is needed. It is ideal for helping to mask new concrete color variations across the project and to blend and minimize the visual impact of patched and repaired concrete surfaces.

INTENDED USE

NuHue's Silicate Mineral Stain is uniquely formulated for use on new or bare, or aged concrete substrates including concrete, CMU, Gunitite, Shotcrete and Portland Stucco. It provides a translucent finish on fair-faced or raw interior and exterior concrete surfaces, and retains the natural, raw appearance of the surface. It is used to decorate or add color or to visually conceal color variations in new or old concrete and for blending and minimizing the appearance of repairs. It may also be used to provide decorative color wash finishes. NuHue's Silicate Mineral Stain offers complete design flexibility and can be diluted as desired with Dilution or Base for a wide variety of translucent finishes. NuHue's Silicate Mineral Stain can also be applied as an opaque thin-layer finish retaining the natural surface texture and providing protective water and weather resistant finishes. Waterproofing may be further enhanced by a pretreatment with Iso-Tek™ 8100 Penetrating Water Repellent. The application of Silicate Mineral Stain together with Iso-Tek™ 8100 complies with water protection requirements as per DIN EN 1504-2/2.2. Silicate Mineral Stain is less weather resistant on horizontal and slightly inclined surfaces. Iso-Stain™ 1550 Mineral Stain protects the concrete from the action of weather and prevents the penetration of atmospheric pollutants. Surface textures of the concrete, such as board-formed textures, are fully retained and never "filled-in". The surface is natural mineral matte in appearance.

SILICATE MINERAL STAIN

Technical Data Sheet

COVERAGE

- Concrete - 325-575 sq.ft./gal**
- CMU (Smooth) - 50-125 sq.ft./gal
- CMU (Split Face) - 25-100 sq.ft./gal
- Gunite / Shotcrete - 100-175 sq.ft./gal
- Portland Stucco - 100-175 sq.ft./gal

SURFACES

- Concrete, Autoclaved Cellular
- Concrete, CMU, Fiber Reinforced
- Concrete, Gunite, Shotcrete, Portland Stucco, & Lime Plaster

SIZES

1 Gallon, 4 Gallon

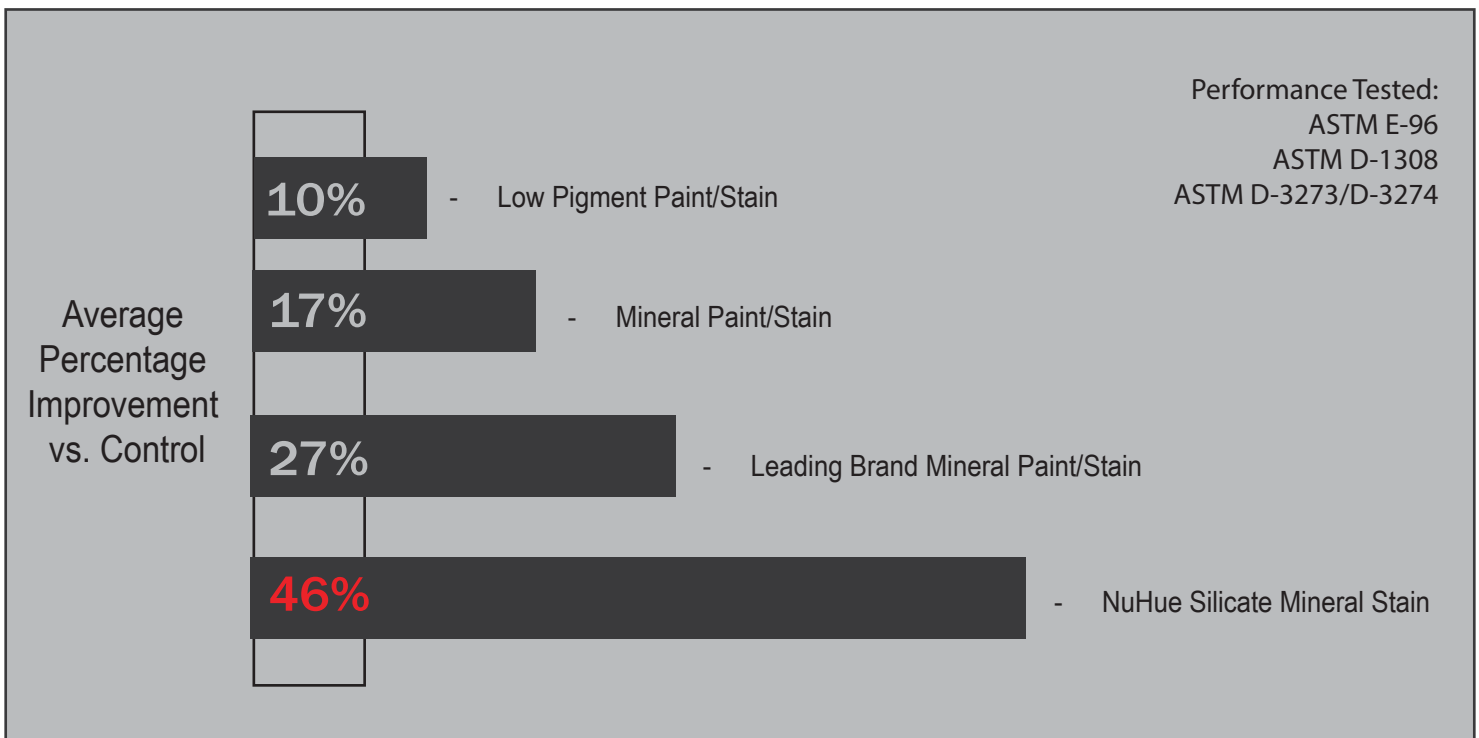
*Surface texture, density, porosity, application conditions and type of equipment used will all vary consumption. Test application, using desired mixing ratio and under production conditions will forecast consumption of the stain accurately.

**Coverage increases for low pigment volume stain applications.

TECHNOLOGY & ADVANTAGES

- **Unifies Uneven or Variable Concrete Finishes.**
- **Extremely Fast Setting** - Dries quickly to reduce downtime
- **Mineral Silicate** - Penetrates into the substrate and forms a permanent chemical bond - will not peel, chip, flake or delaminate.
- **Excellent Light-fastness** - Color will not fade, change, oxidize. Pigment will retain its original color over time, especially when exposed to direct sunlight.
- **100% Breathable** - Non-film forming. Allows moisture within the concrete to escape without adverse effects to the sealer. Does not trap moisture.
- **Full Range of Opacities** - On-site or premixed, any combination of color and amount of translucency - leading to maximum design flexibility.
- **Weather and Moisture Resistant**
- **Resists Atmospheric Staining** - Not affected by pollution or acid rain. Resists mold, mildew, and efflorescence.
- **Matte Finish** - Completely compatible with natural appearance of raw concrete.
- **Increases Light Reflectivity** - concrete surfaces appear brighter, even in low light.
- **UV Stable** - Will not break down or degrade with long-term exposure to UVA or UVB rays.

RESISTANCE TO COLOR FADING / WATER VAPOR TRANSMISSION / FUNGAL DEFACEMENT OF COATING



TESTING DATA	
Density	1.20 g/cm
VOC by ASTM D6886	< 1 g/liter
Vapor Diffusion	sd (H2O) = <0.01 m
Water Absorption Coefficient	W = 0.20 kg/m ² h 0.5 (acc. to DIN EN 1504)
Lightfastness of pigment (Fb-Code acc. to BFS technical bulletin No. 26)	A1 Best in Class rating. No color change after 4 years
Vapor Permeability (ASTM E96)	75 - 85 Perms
Flashpoint	Non-Flammable
Alkali Resistance (ASTM D1308)	Passes
Mildew Resistance (ASTM D3273/D3274)	Passes
Thermal Expansion	Comparable to the concrete substrate
Gloss at 85 Degrees (F)	2.0 Mineral Matte Flat

All test results performed on 2 coats Silicate Mineral Stain applied at 325—375 sf/gallon

SPECIFICATIONS/SYSTEMS

For proper waterproofing and weather resistant performance, 2 coats of Iso-Stain™ 1550 Mineral Stain must be applied at recommended coverage rates. Surface should be fully coated, with no pinholes, runs or holidays.

CAST OR PRE-CAST BARE CONCRETE - TRANSLUCENT FINISH

Pretreat: Micro-Degreaser™ 1100
 1 coat Iso-Stain™ 1550 Dilution (mixed 1:3 with water)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 *For opaque finish—do not dilute stain

CMU BLOCK

1 coat Iso-Stain™ 1550 Dilution (mixed 1:3 with water)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 *For opaque finish—do not dilute stain

WATERPROOFING SYSTEM

1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 1 coat Iso-Tek™ 8100 Silane Water Repellent

PORTLAND STUCCO

Pretreat: Iso-Stain™ 1550 Dilution (mixed 1:3 water)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)
 1 coat Iso-Stain™ 1550 Stain (diluted as desired)

PRODUCT APPLICATION

SURFACE PREP

The substrate must be sound, solid, dry, clean and free of dust, grease, oils, salts, moss, algae and other substances that would prevent bonding. Old resin coatings, loose substrate layers and organically bound coats must be removed. For new concrete structures, concrete should be at least 28 days old and any formwork oil, mold lubricating oil, shuttering oil, mold release oil, concrete form oil residues and curing compounds should be removed with Micro-Degreaser™ 1100 or by other methods. Substrate must be porous and water should not “bead” on surface. Clean, properly cured concrete, without a sinter layer, requires no pre-treatment. Concrete that will be exposed to severe weather or moisture may be treated with Iso-Tek™ 8100 for added water repellency. Apply Iso-Tek™ 8100 per tech data sheet. It is recommended that Iso-Tek™ 8100 be applied roughly 4-12 hours after NuHue’s Mineral Silicate Stain under normal drying conditions (application window may be reduced in extreme drying conditions). Soft, porous or friable concrete surfaces, surfaces where porosity is variable or aged existing mineral coats may be stabilized and consolidated by pre-treatment with Iso-Stain™ 1550 Dilution. Mix 1 part Dilution with 3 parts fresh water and apply to porous surface to saturation. Allow surface to dry 12 hours before proceeding.

TRANSLUCENT STAIN APPLICATION

NuHue’s Silicate Mineral Stain may be diluted in any ratio with Iso-Stain™ 1550 Dilution or Base depending on the desired translucency of the finish. It is recommended to coat trial areas in order to determine the dilution ratio. Keep diluted Iso-Stain™ 1550 Stain well stirred before and during work as pigment will settle out quickly in the low viscosity stain. Neither water nor any other materials may be added. It is important to work swiftly using wet-on-wet application to maintain a wet edge to a corner or architectural feature. Never stop staining in the middle of a facade. The Silicate Mineral Stain system components of Stain, Base and Dilution can be mixed together in any desired ratio. Base provides a more uniform and less transparent stain and maintains a heavier viscosity (thicker stain). Dilution allows for the most translucent low pigment finishes with brilliant colors and thin layer thickness, and results in thinner viscosity.

OPAQUE STAIN COATING

Two coats of Silicate Mineral Stain can be applied as an opaque protective coating which retains the texture of the surface. In this application the first coat should be diluted 10 - 25% with Dilution and the second coat applied undiluted by brush, roller or spray, keeping a wet edge. It is important to work swiftly wet-on-wet and to maintain a wet edge to a corner or architectural feature.

PRODUCT APPLICATION (CONT.)

APPLYING

Air and surface temperature: >41 degrees (F) and up to maximum 86 degrees F (5 degrees C to 30 degrees C) with relative humidity below 80%. Apply only to dry surfaces and in dry weather. Do not apply in direct sun or sun-heated substrates or in strong wind. Surfaces must be protected after application from rain, wind and direct sun until they are completely cured or a minimum of 12 hours.

RECOMMENDED TOOLS

Brush: Use a nylon/polyester brush

Roller: Use a 3/8" - 1/2" nap synthetic roller cover

Airless spray: 3000 psi suggested with a tip size of 0.25 in, minimum

DRYING TIMES

At least 12 - 24 hours between coats with regular drying conditions. Lower temperatures and high humidity can extend dry times.

COVERAGE

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MIXING (WITH OTHER PRODUCTS)

In order to maintain the specific features of NuHue's Silicate Mineral Stain and the related system products, they must not be mixed with other products or additives nor must they be diluted with water.

CLEAN-UP

Clean immediately after use with water. Tools should be kept in the paint material or in water during work breaks.

STORAGE & DISPOSAL

Approx. 12 months in tightly closed container under cool, frost-free conditions. Protect from heat and direct sunlight. Dispose of completely emptied containers in accordance with local, state and federal waste regulations.

SAFETY

Provide appropriate protection for surfaces which are not to be coated (e.g. glass, natural stone, ceramics etc.). Any splashes on surrounding surfaces or traffic areas must be rinsed off immediately with plenty of water. Protect the eyes and skin from splashes. Keep out of reach of children. The stated values and properties are the result of extensive development work and practical experience. Our recommendations for application, whether given verbally or in writing, are intended to provide assistance in the selection of our products and do not establish a contractual relationship. In particular, they do not release those purchasing and applying our products from the duty of establishing for themselves, with due care, the suitability of our products for the intended application. Standard building industry practices must be complied with. We retain the right to make modifications to improve the products or their application. This editions supercedes all earlier editions.

WARRANTY

NuHue warrants our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Any use or application other than recommended herein is the sole responsibility of the user. Listed physical properties are typical and should not be construed as specifications. No warranty is made, expressed or implied, regarding such other information, the data on which it is based or the results you will obtain from its use. We shall have no liability for incidental or consequential damages, direct or indirect. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sales of our products. Our products contain chemicals that may cause serious physical injury. Before using, read the Safety Data Sheet and follow the precautions to prevent bodily harm.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on NuHue's present knowledge and experience. However, NuHue assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. NuHue reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

For professional use only. (Last revised 11/24).

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