

Case Study

CeramicSteel vs Whiteboard Paint

Introduction

Enter a quick web search and you will find an overwhelming selection of writing surfaces for use in offices, classrooms and homes. For a decision that requires a significant investment, it's important to understand the benefits and drawbacks of each surface type. In recent years, the use of whiteboard paint, also called dry erase paint, has been a popular choice in the DIY community to make smooth, flat surfaces writeable. This appeal stems from the product's relatively-low cost and easy application – who doesn't want to write on their walls, doors and tables? It has even been used in some offices and classrooms. But just how durable is it? We put the paint to the wall to see how it compares to the quality and durability of CeramicSteel.

Case Study



What is the difference?

Whiteboard paint is a high-gloss paint typically containing an epoxy additive that dries to an erasable surface.

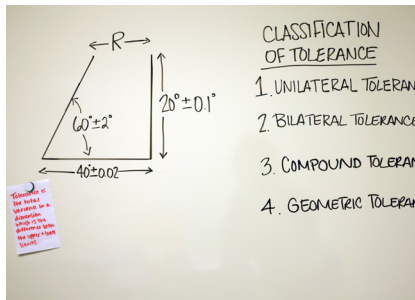
CeramicSteel, on the other hand, is a vitreous (aka glass-derived) porcelain enamel fused to steel to create a surface that is smooth, magnetic and resistant to stains, scratches, bacteria and fire.

	CeramicSteel	Whiteboard Paint
Materiality	<ul style="list-style-type: none"> • Porcelain enamel fused to steel at 800°C / 1500°F 	<ul style="list-style-type: none"> • High gloss paint • Typically a two-component epoxy paint
Durability	<ul style="list-style-type: none"> • Resistant to bacteria, chemicals, fire and scratching • Withstands high-traffic areas and heavy use 	<ul style="list-style-type: none"> • Only as hard as the wall it is painted on and easily sustains damage • Wears away with extended or heavy use
Dry Erase Performance	<ul style="list-style-type: none"> • Never stains or ghosts • Easily withstands permanent marker • 3x better initial erasability • 10x better erasability after aging • Smooth surface without friction 	<ul style="list-style-type: none"> • Stains and ghosts easily • No permanent marker • Lower initial erasability • Does not maintain dry erase quality with aging • Inconsistent texture
Value	<ul style="list-style-type: none"> • Price per SQFT is \$8-\$18 with installation 	<ul style="list-style-type: none"> • Price per SQFT is \$6-\$11 with intallation
Versatility + Design Flexibility	<ul style="list-style-type: none"> • Always magnetic • Designed for style and customization • Offers a wide selection of colors and custom image/design printing • Floor-to-ceiling options and sizes 	<ul style="list-style-type: none"> • Magnetic primer option at additional cost that only retains rare earth magnets that cost approximately \$15 each • Flexible design capacity • Four color options, must use clear for colored or design backgrounds
Environmental Impact	<ul style="list-style-type: none"> • Cradle-to-Cradle Certified Bronze • Indoor Advantage Gold certification • 90% recyclable 	<ul style="list-style-type: none"> • High odor emissions • Empty paint canisters go to landfills • Some products are green certified after curing
Longevity	<ul style="list-style-type: none"> • Lifetime warranty • Lasts for 50+ years • Will never require replacement 	<ul style="list-style-type: none"> • Limited warranties • Lasts for 2-5 years • Requires frequent re-application
Installation	<ul style="list-style-type: none"> • As straightforward as hanging a framed photograph • Takes minutes to install 	<ul style="list-style-type: none"> • Requires mixing, curing, proper ventilation and multiple coats • Takes over seven days to cure
Customer Service	<ul style="list-style-type: none"> • Consistent customer service personnel at individual dealer locations 	<ul style="list-style-type: none"> • Sold in retail stores and online • Unresponsive call lines

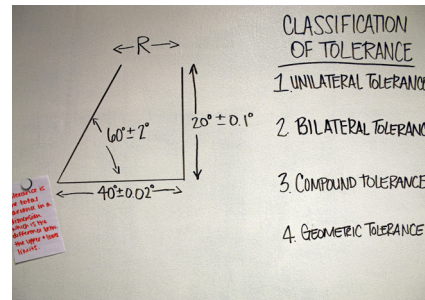


Gloss

Superior writability begins with a smooth surface. CeramicSteel offers a glass-like writing plane from end-to-end. Conversely, when whiteboard paint is applied to a smooth, flat surface (often plastic or drywall) it reveals an “orange peel”, or bumpy, texture despite its application with a smooth paint roller. This produces a lower gloss than its CeramicSteel counterpart and creates friction, resulting in resistance when writing and erasing.



CeramicSteel

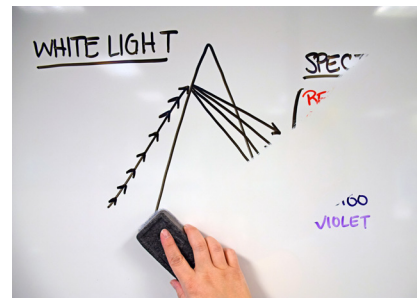


Whiteboard Paint

Erasability

As a non-porous surface made of inorganic material, CeramicSteel will not absorb ink, no matter if it is from dry erase or permanent marker. This means CeramicSteel writing surfaces will not “ghost” or stain. Dry erase marker ink can be wiped easily from the surface with a dry cloth or standard eraser, while pen ink, semi-permanent and permanent marker can be removed with a solvent-based cleaner.

The erasability of dry erase markers on whiteboard paint is lower than CeramicSteel because of its lower gloss level and uneven surface – not to mention, paint is porous. This becomes three times worse upon aging. All of this means that whiteboard paints will absorb ink from markers, staining over time and they are not compatible with the use of permanent markers like CeramicSteel.



CeramicSteel

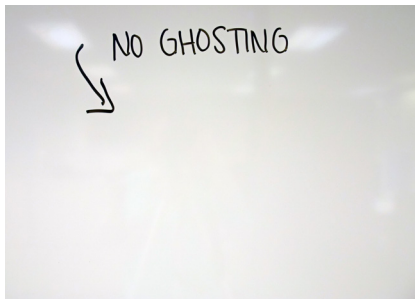
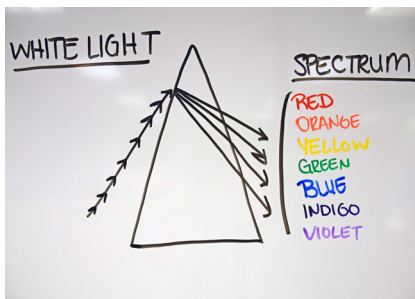


Whiteboard Paint

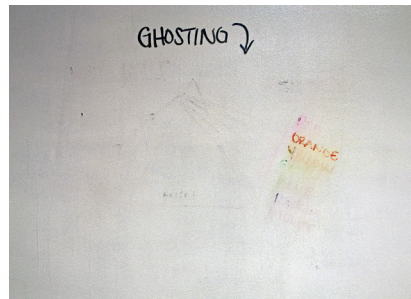
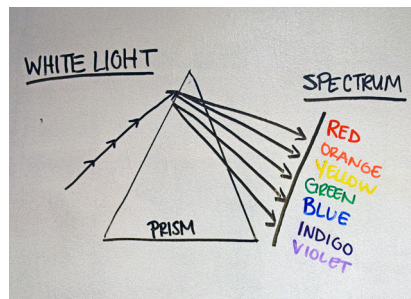
Surface Hardness

The definition of surface hardness is how strong or resistant to wear a surface is. CeramicSteel is a porcelain enamel and is as hard as glass. It will not dent and is not easily broken. In fact, it's so strong Polyvision backs it with a Forever Warranty, guaranteeing the surface for the life of the building it is installed in or for the life of the product, whichever comes first.

Whiteboard paint is only as hard as the surface it is painted on. Damage and stains will happen more easily on a painted surface, just like any painted wall, and will not offer the same professional look as an unblemished CeramicSteel surface.



CeramicSteel



Whiteboard Paint

Magnetic Capability

Useful for posting bulletins, announcements and other important documents, a surface with functional magnetic capabilities is sought after in the market. The magnetic nature of CeramicSteel is evident in the name. As a vitreous porcelain enamel fused to steel, CeramicSteel is a surface with high-powered magnetism. Painted whiteboard surfaces are not inherently magnetic, so the paint must be applied to a magnetic surface to function as such. While offering magnetic capabilities is not at the center of a quality writing surface, it does enhance the value and functionality of the product.



Scratch + Abrasion Resistance

International standards were used to test both whiteboard paint and CeramicSteel. The scratch resistance test clamps a sample of the surface to a turn table. A weight-loaded arm then drags a standardized diamond needle over the surface as the sample turns one revolution. The weight of the scratches is varied to make 10 different scratches. The scratches are marked with 4 different dry erase colors, dried and wiped clean before being evaluated. The scratches that permanently damaged the surface are shown if the dry erase ink stayed in on the scratched area after cleaning. In this test, whiteboard paint was easily scratched, and while the only thing that can scratch CeramicSteel is diamond, there was minimal damage to the surface.



CeramicSteel



Whiteboard Paint

Durability

Tests are performed on surfaces to determine their durability, mimicking long-term wear in high-intensity tests. The Taber abrasion uses a turntable and sand paper to measure wear resistance and durability.

CeramicSteel shows very little abrasion, while whiteboard paint is eroded to the substrate. This shows that whiteboard paint will not maintain its quality in areas with heavy traffic and will not withstand long-term use. Over time, the surface will degrade and require re-painting or replacement. CeramicSteel will never decrease in erasability and the surface will not wear away over time.



Chemical Resistance

The purpose of testing for chemical resistance is to determine whether a surface will withstand frequent cleaning, chemical accidents in laboratories and other harsh settings. CeramicSteel is a non-porous, glass-like surface made of inorganic material. This results in a resistance to anything that attempts to permeate the surface, whether it is bacteria or harsh chemicals. Whiteboard paint does not hold up to chemicals, showing significant wear and reduced functionality after chemical resistance testing. This is a testament to the longevity of CeramicSteel when compared to whiteboard paint.

Installation

The process for installing CeramicSteel whiteboards is as straightforward as hanging a picture. Arrange the mounting brackets where you would like the board to go, mark the holes and drill, hang the brackets and mount the board. This is a two-person process due to the weight of CeramicSteel whiteboards, but a simple one.

Whiteboard paint requires wall preparation including painting, sanding and cleaning. Once this is complete, the two-part paint requires mixing. The paint itself often has a strong odor and proper ventilation is recommended. After the paint has been mixed, it should be rolled onto the prepared surface with a lint-free roller. Two or more coats are usually required for enough coverage. When the right look is achieved, a minimum of 24 hours is required for the paint to cure before use.

Closing

CeramicSteel and whiteboard paint both have their place in the world of writing surfaces. DIYers and craft aficionados enjoy the versatility and creative freedom offered by whiteboard paint products. For a professional, a lasting investment that is sustainable, resistant to high-traffic environments and time-tested by students in more than 8 million classrooms around the world, CeramicSteel is the clear choice for education, corporate and healthcare environments.



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