e³ CeramicSteel

Satin-Gloss Writing Surfaces

Type S whiteboard surfaces are ultra smooth, with significantly less distortion from light reflection (i.e., waviness, orange peel) for better visibility and dry erasability. This surface has less reflection than Type H or Type U surfaces. Type S is ideal for magnet-retaining applications and easy to maintain. You can write on Type S CeramicSteel with dry-erase, semi-permanent, water-soluble or permanent marker, chalk, pen or crayon and simply wipe it clean. Type S CeramicSteel is available in three colors and is customizable with logos or graphics.

Polyvision e³ CeramicSteel is the most popular writing surface worldwide for whiteboards, chalkboards and projection surfaces. The only surface to achieve Cradle to Cradle Certified® Silver, e³ CeramicSteel delivers writability, erasability and a lifetime of durability like no other surface. Polyvision CeramicSteel is made for life — guaranteed.

Polyvision®
SURFACE MATTERS

Chemical Resistant

Scratch Resistant

Bacteria Resistant

Fire Resistant

Graffiti Resistant

Stain Resistant

Hygienic Surface

CeramicSteel is a nonporous surface that is naturally resistant to bacteria and viruses. Coils, sheets, and panels with type U finish are also available in Polyvision's Hygienic CeramicSteel — a proprietary finish that incorporates an additive of silver micro particles formulated to create a self-sanitizing surface.

Sustainable

Polyvision's e³ CeramicSteel is Cradle to Cradle Certified™ Silver, highlighting the sustainable manufacturing process of the product. CeramicSteel is also 99.9% recyclable. CeramicSteel is also certified by SCS Global Services as Indoor Advantage Gold™, meeting strict indoor air quality (IAQ) chemical emission limits for volatile organic compounds (VOCs).

Customizable

CeramicSteel type H and U can be customized to support specific sheet sizes, custom colors and digital printing. Incorporate our material into your whiteboard design for premium aesthetics and functionality.

CeramicSteel Features and Benefits

- Smooth, inert surface
- Made from inorganic materials
- Magnetic
- Colorfast, will never fade
- Resistant to bacteria, graffiti, fire, scratches, stains, and chemicals
- Easy to clean
- Releases zero VOCs

With state-of-the art manufacturing and design, Polyvision's ability to create custom shapes, sizes and surface imagery is endless.

Applications

CeramicSteel can be utilized to enhance the performance and environment of the following spaces:

- Streamlined Collaborative Surfaces for Conference Rooms & Classrooms
- Systems integration for the contract furniture industry
- Sanitary Surfaces for Patient Rooms / Clean Rooms
- Sanitizing, Durable Surfaces for High Traffic Vertical Planes & Countertops in Quick Service Restaurants (QSR)
- Sanitizing, Durable Surfaces for High Traffic Vertical Planes & Countertops in Fuel Stations & Convenience Stores
- Sanitizing, Durable Surfaces for Grocery and Pharmacy
- Sanitizing, Durable Surfaces for Vertical Planes & Partitions in Public Restrooms
- Sanitizing, Durable Surfaces for Commercial Kitchens & Food Grade Warehousing
- Sanitizing, Durable Vertical Planes for Hospitality, Hotel, & Office Lobbies
- Sanitizing, Durable Surfaces on Elevator Vestibules
- Sanitizing, Durable Vertical Planes for high foot traffic areas such as airports, stadiums, and mass transport stations

Specifications

Property	Ref. in Doc. n° 41.822	Specification	Whiteboard e³ S
Total thickness enamel top coatings	1	ISO 2178 / ASTM B499	85 - 120 µm / 3.35 - 4.72 mills
Steel thickness	2		See page 5
Thickness back-side enamel coating	3	ISO 2178 / ASTM B499	Type A: 25 - 50 µm / 0.98 - 1.97 mills Type B: 35 - 50 µm / 1.38 - 1.97 mills
Total thickness	4		See page 5
Available standard widths	5		See page 5
Available standard colors	6		See page 5
Weight (typical)	7	-	2.9 - 3.2 kg/m²
Color deviation from standard	8	ISO 7724 / ASTM D2244-02	ΔE^{94} = 1.5 max
Gloss	9	ISO 2813 / ASTM D523 60° ISO 2813 / ASTM D523 20°	(Indicative: 83 GU) 40 (+10/-5) GU
Mohs surface hardness	11	EN 15771	Min. 5
Scratch resistance	12	ISO 15695	Min. 7 N
Pencil hardness	13	ASTM D-3363	> 9H
Wear resistance	14	ASTM C 501 (Abrasive S 33/1 kg/1000 revs.)	Max. 0.1 g
Impact resistance	15	ISO 4532 (20N - 24h)	< 2 mm
Cold acid resistance	16	EN 14483-1-9 / ISO 28706-1-9	Min. A
Solvent resistance	17	PVNV 41.822	No change
Fire resistance	18	EN 13501-1 +A1	Incombustible - Class A1
Color stability	19	ASTM C 538	ΔE^{94} ≤ 5
Dry-erasability of drymarkers	24	PVNV 41.803	Good (ΔE^{94} ≤ 4.5)
Erasability of water-based markers with water	25	PVNV 41.822	Excellent (ΔE^{94} ≤ 1.5)
Erasability of permanent markers with alcohol	26	PVNV 41.822	Excellent (ΔE^{94} ≤ 1.5)
Durability	27	PVNV 41.809	RG<30%
Erasability of an aged surface	28	PVNV 41.809	Good (ΔE^{94} ≤ 4.5)
EN ISO 28762	29	EN ISO 28762	Fulfilled
European Enamel Authority	30	EEA Quality Requirements	EEA 7.17: Fulfilled
MBDC Cradle to Cradle Certified	31	Cradle to Cradle Silver	Certified
PEI 1002 compliant	32	PEI 1002	Fulfilled
ISO 9001, ISO 14001 compliant	33	ISO 9001	Certified

Advantages

- Super-smooth writing surface
- Optimum erasability and no ghosting
- Scratch, fire, bacteria and chemical resistant
- Minimal surface/light distortion for enhanced visibility
- Safe and clean: Cradle to Cradle® Certified Silver, 99% recyclable, no VOCs
- Standard and premium color finishes available
- Better color contrast and colorfast — will not fade

Table 1

Available Steel Widths and Thicknesses						Regional Availability		
Width (mm)	Width (in)	Thickness (mm)	Thickness (in)	Total Thickness o/t e³ CeramicSteel (mm)	Total Thickness o/t e³ CeramicSteel (in)	EMEA	APAC	AMERICAS
874 +2/-0	34.4 +0.08/-0	0.32 ± 0.03	0.0126 ± 0.001	0.4 - 0.51	0.0157 - 0.0200	x	x	
888 +2/-0	35 +0.08/-0	0.32 ± 0.03	0.0126 ± 0.001	0.4 - 0.51	0.0157 - 0.0201		x	
974 +2/-0	38.3 +0.08/-0	0.32 ± 0.03	0.0126 ± 0.001	0.4 - 0.51	0.0157 - 0.0202	x	x	
999 +2/-0	39.3 +0.08/-0	0.32 ± 0.03	0.0126 ± 0.001	0.4 - 0.51	0.0157 - 0.0203	x	x	
1174 +2/-0	46.2 +0.08/-0	0.35 ± 0.03	0.0138 ± 0.001	0.43 - 0.54	0.0169 - 0.0212	x	x	
1188 +2/-0	46.8 +0.08/-0	0.35 ± 0.03	0.0138 ± 0.002	0.43 - 0.54	0.0169 - 0.0213		x	
1199 +2/-0	47.2 +0.08/-0	0.35 ± 0.03	0.0138 ± 0.003	0.43 - 0.54	0.0169 - 0.0214	x	x	
1216 +2/-0	47.9 +0.08/-0	0.35 ± 0.03	0.0138 ± 0.004	0.43 - 0.54	0.0169 - 0.0215	x	x	
838.2 +3/-0	33 (-0 +1/8)	0.33 ± 0.03	0.013 (± 0.001)	0.43 - 0.55	0.017 - 0.0215			x
877.9 +3/-0	34-9/16 (-0 +1/8)	0.33 ± 0.03	0.013 (± 0.001)	0.43 - 0.55	0.017 - 0.0215			x
911.2 +3/-0	35-7/8 (-0 +1/8)	0.33 ± 0.03	0.013 (± 0.001)	0.43 - 0.55	0.017 - 0.0215			x
1179.5 +3/-0	46-7/16 (-0 +1/8)	0.33 ± 0.03	0.013 (± 0.001)	0.43 - 0.55	0.017 - 0.0215			x
1216 +3/-0	47-7/8 (-0 +1/8)	0.33 ± 0.03	0.013 (± 0.001)	0.43 - 0.55	0.017 - 0.0215			x
1216 +3/-0	47-7/8 (-0 +1/8)	0.48 ± 0.03	0.019 (± 0.001)	0.58 - 0.68	0.023 - 0.027			x
1520.8 +3/-0	59-7/8 (-0 +1/8)	0.48 ± 0.03	0.019 (± 0.001)	0.58 - 0.68	0.0253 - 0.0293	x	x	x

Table 2

Color	Description	ISO 7724				Regional Availability		
		L*	a*	b*	ΔE⁹⁴ vs standard	EMEA	APwAC	AMERICAS
6500 C	Green	36.7	-15.7	4.7	< 1.5	x	x	x
6501 C	Black	23.7	-15.7	4.7	< 1.5	x	x	x
6502 C	Slate	36.5	0.6	0.2	< 1.5	x	x	x
6503 C	Blue	34.7	-6.0	-26.5	< 1.5	x	x	
6505 C	Green	36.7	-15.7	4.7	< 1.5		x	
6100 L/S/H/U	White	90.0	-0.4	2.9	< 1.5	x	x	x
6101 L/S/H/U	Gray	79.1	0.1	2.9	< 1.5	x	x	x
6102 L/S/H/U	Beige	87.4	1.6	14.3	< 1.5	x	x	x
6104 L/S/H/U	Pastel yellow-greenish	79.6	-3.4	15.3	< 1.5		x	
5650 P	White	88.3	-1.1	3.5	< 1.5	x	x	x
	indicative values only							

Specification Example

Gloss expressed in gloss units (GU) should be 55 (+10/-5) GU when measured with a 20°-gloss meter according to ISO 2813 / ASTM D523. Surface is produced using a continuous coil coating process with a steel core of 0.013" or 0.019" and enamel coating on both sides. 0.023" ± 0.004" thick, incombustible and Cradle to Cradle Certified® Silver. Meets all requirements of (i) EN14864 / ISO 28762, (ii) chapter 7.15 of the EEA (European Enameling Authority UK, GE, AU, NL, BE), and (iii) PEI 1002.

Conclusion

The e³ CeramicSteel surface is under Polyvision's Forever Warranty to provide a lifetime of durability and superior performance, resulting in low maintenance costs and a high return on investment.

Cleaning + Care | Markerboards

Cleaning Before First Use

1. If present, remove the protective film.

2. CLEAN: Wipe board with a clean cloth (*) moistened with a mix of isopropyl alcohol and water (30/70) — the most effective whiteboard cleaner (**).

3. RINSE: Rinse the surface with water and a clean cloth.

4. DRY: Wipe surface dry with a clean cloth.

General Cleaning & Maintenance

1. CLEAN: Wipe board with a clean cloth (*) moistened with:

   a. Water: in most cases this will clean the surface just fine.

   b. Or a mix of isopropyl alcohol and water (30/70 %v/v) — the most effective whiteboard cleaner (**).

2. RINSE: Rinse the surface with water and a clean cloth.

3. DRY: Wipe surface dry with a clean cloth.

Cleaning frequency depends on the intensity with which the writing surface is being used. Daily or at the very least weekly cleaning is recommended.

Removing Markings & Residue

1. CLEAN: Moisten a clean, dry cloth with water.

   a. Apply a small amount of an abrasive cleanser to the cloth.

   b. Working in small sections, clean the area using a back-and-forth motion with gentle pressure.

Note: For best results, follow the manufacturer's instructions on the label.

2. RINSE: Rinse well with clean water as soap residues on the surface will result in decreased dry erase-ability.

3. DRY: wipe dry with a clean cloth.

4. To quickly and easily remove permanent marker, write over the top of the writing with a dry-erase marker. Then, simply erase. In most cases, this will remove the marker.

* For best results use microfiber cloth

** Using a non-appropriate cleaner may result in poor dry erase-ability due to the build-up of residues from the cleaner on the surface.

Corporate Responsibility

Polyvision believes that sustainability is an important business practice in today's global economy. In line with this belief, we strive for continuous improvement in all areas of environmental stewardship — responsible use of raw materials and natural resources, manufacturing processes and operation of all facilities — to reduce the impact of our activities on the environment. In the end, we believe we are all in this together, working to protect and cultivate the world we live in to make more sustainable choices.

Manufacturing Excellence

All Polyvision facilities are compliant with international standards and certified for Quality, Environment, Health and Safety. Our environmental goals aim to reduce and manage our global environment footprint in the areas of VOC emission, water use, waste output and CO_2 emission.

- ISO 9001 Quality Management Systems Certification
- ISO 45001 Occupational Health & Safety Management Certification

Ensuring A Sustainable Future

In addition to safe and sustainable manufacturing processes, Polyvision holds our products to the highest standards. We are third-party certified for our CeramicSteel surface by:

- Cradle to Cradle Certified — releases no harmful chemicals into the environment, safeguards clean water, materials are safe for humans and the environment
- Indoor Air Quality Certified to SCS.EC10.3-2014 v4.0
- ISO 14001 Environmental Management Certification

Warranty Protection

Polyvision warrants that any CeramicSteel surface manufactured by Polyvision will retain its writing and erasing qualities and maintain its gloss variance and color consistency for the life of the building or for as long as the product is in use, whichever comes first. In addition, Polyvision warrants that any Hygienic CeramicSteel surface manufactured by Polyvision will retain its Hygienic properties for the life of the building or for as long as the product is in use, whichever comes first.

Should any failure to conform to this warranty become apparent, then, upon written notice from the customer, Polyvision, at its option, will correct such nonconformity by repair or replacement. Correction in the manner provided above shall constitute a fulfillment of all liabilities of Polyvision with respect to the quality of the CeramicSteel writing surface. The warranty is applicable only under normal usage and maintenance and does not cover defects caused by improper handling, vandalism or abuse, or arising from failure to follow Polyvision's instructions and recommendations for maintenance.

The warranty is voided if any modifications are made to the products by the customer or other trades with or without Polyvision's written consent or prior knowledge. The warranty does not include the cost of removal or reinstallation. This warranty is effective as of June 4, 2009, and supersedes the terms and conditions of all prior surface warranties issued to the customer by Polyvision.

This limited warranty is the sole remedy for product defects and no other express or implied warranty is provided, including but not limited to any implied warranties of merchantability or fitness for a particular purpose. Polyvision shall not be liable for consequential or incidental damages arising from any product defect.

SURFACE MATTERS™

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