

### 1. PRODUCT NAME

NUDO CeramicSteel a3 Panels

### 2. MANUFACTURER

NUDO, 1500 Taylor Ave, Springfield, IL 62703

Phone: 800.826.4132

Fax: 217.528.8722

Email: info@NUDO.com

Web: www.NUDO.com

### 3. PRODUCT DESCRIPTION

NUDO's mission is to be a solution provider that offers our customers the most cost effective, quality laminated panel products with on-time delivery. NUDO has partnered with PolyVision to produce both an interior and exterior architectural building product panel system, NUDO CeramicSteel a3.

#### Basic Use

NUDO CeramicSteel a3 panels combine porcelain enameled steel surface with composite substrate to meet your application requirements. NUDO CeramicSteel a3 panels are offered in a selection of colors and finishes, laminated to Cement Bonded Fiberboard core with rolled galvanized

The panels are great for high traffic environments in both new construction and renovation projects:

- Lobbies, Corridors
- Hospitals
- Airports
- Sports Venues
- Convention Centers
- Escalator & Elevator Cladding

#### Types

Option 1: NUDO CeramicSteel a3 panel bonded to High Density Fiberboard (HDF) and aluminum backer

Option 2: NUDO CeramicSteel a3 panel with Cement Board (CB) core and aluminum backer

Option 3: NUDO CeramicSteel a3 panel with Aluminum composite core and aluminum backer  
Custom substrate are available.



#### Sizes, Composition, Materials

See Table 1.

#### Colors

- Bone White (7563)
- White (6100L – WS)
- New White (PEI-N-52)
- Stone White (PEI-118)
- Ivory (PEI-14)
- Stone Gray (513)
- Powder Gray (PEI-22)
- Matte Black (TCM-14)
- Black Chalkboard (6501-C-WS)
- Glossy White (6100H-WS)
- Glossy Black (PEI-28-WS)
- Custom Colors and Graphics Available

#### Finish

NUDO CeramicSteel a3 panels are available in matte or high gloss finish.

#### Benefits

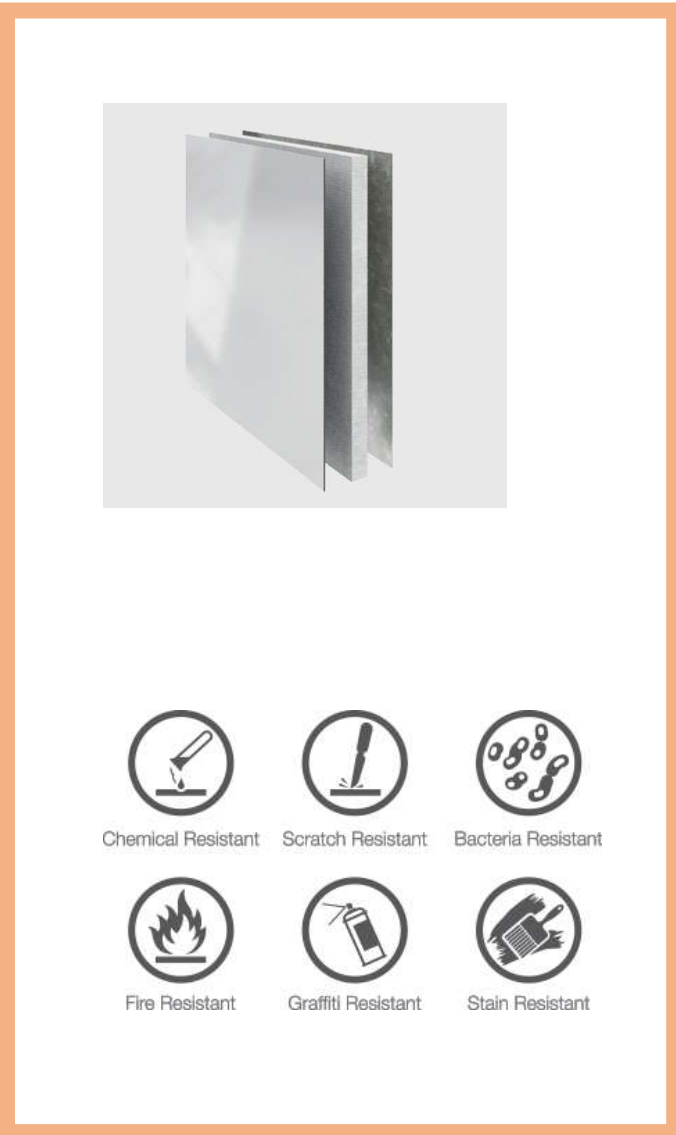
- Nonporous surface protects against graffiti and staining
- Easily cleaned with water or solvent
- Scratch, Bacteria and Chemical resistant
- Impact strength
- Fire resistant

**Table 1: Size and Panel Composition**

NUDO CeramicSteel		
Nominal Sizes (Custom Available)	4'x8'	4' x 10'
Surface Sheet: Porcelain steel sheet in accordance with ASTM A424	.56mm	
Core: Cement bonded particle board	12mm	
Panel Backing: Thick cold rolled galvanized steel	.4 mm	
Overall Panel Thickness	13.4mm	

**Table 2: Surface Technical Properties**

Properties	
Tensile Strength	3500 min
C 297	
Shear Strength	1070N
D 1002	
Flame Spread	Class I/A
E 84	
Pencil Hardness	>9H
D 3363	
Wear Resistance	Max 0.1g
C 501	
Neutral Salt Spray	Comply
ISO 9227	
Color Stability	$\Delta F^{94} \leq 5(24h)$
C 538	
Scratch Resistance	Min 7N
ISO 15695	
Graffiti Resistance	No color or gloss change after cleaning
ISO 28722	
Impact Resistance	No damage over 2mm after 24h (20 N load)
ISO 4532	
UV Resistance	$\Delta F^{94} \leq 5(2000h)$
Iso 4892	
Cold Acid Resistance	Min Class A
ISO 28706-1	
Boilding Acid Resistance	Max 18.5 g/m <sup>2</sup>
ISO 28706-2	
Orange Peel	SW $\leq$ 5: LW $\leq$ 25 Distinctness of Image $\geq$ 60
D 523	
Reflectance	Y - Value up to 93%
D 2244	



## 4. TECHNICAL DATA

### Applicable Standards

#### ASTM International (ASTM)

**ASTM C501** Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser

**ASTM C538** Method for Color Retention of Red, Orange, and Yellow Porcelain Enamels

**ASTM D2244** Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates

**ASTM D3363** Standard Test Method for Film Hardness by Pencil Test

#### International Organization for Standardization

**ISO 4532** Vitreous and porcelain enamels -- Determination of the resistance of enameled articles to impact -- Pistol test

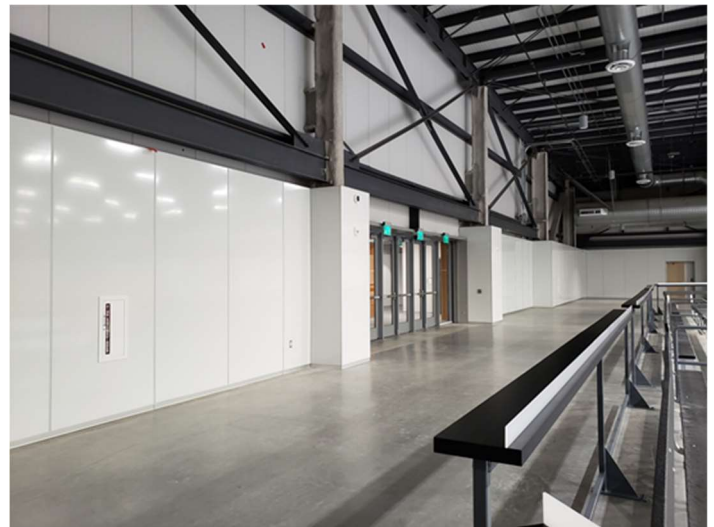
**ISO 4892** Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps

**ISO 15695** Vitreous and porcelain enamels -- Determination of scratch resistance of enamel finishes

**ISO 28706-2-10** Vitreous and porcelain enamels -- Determination of resistance to chemical corrosion by boiling acids, boiling neutral liquids and/or their vapors

#### Technical Properties

See Table 2.



## 5. INSTALLATION

### Preparatory Work

Deliver product in original, unopened, undamaged containers with identification labels intact. Store protected from exposure to harmful environmental conditions, above floor level, dry, frost-free and at temperature and humidity levels recommended by the manufacturer.

### Precautions

Exercise care during off-loading and installation to avoid damage and marring of finishes. Refer to the handling instructions for details.

### Methods

NUDO CeramicSteel a3 panels must be installed by an NUDO qualified installer who is trained and experienced in skills required with a minimum of 5 years experience. Comply with NUDO installation instructions. Set units plumb, level and true to line, without warp or rack of clips or panels. Provide proper support and anchor securely in place. Make field cuts as necessary for penetrations using a power panel saw or skill saw. Use metal cutting, high tooth-count, carbide tip blades liberally lubricated with blade wax. The use of a NIOSH approved respirator is recommended when saw cutting fiber-cement core panels. Protective coating must be applied to exposed panel edges and cut-outs, (i.e. Armeron™ or Dowcorning™ 795).

### Building Codes

Ensure installation complies with the requirements of all applicable local, state and federal code jurisdictions.

## 6. AVAILABILITY AND COST

NUDO CeramicSteel a3 panels are sold through authorized distributors throughout the U.S., Canada and Bahamas. Contact NUDO for availability and cost information within a specific region.

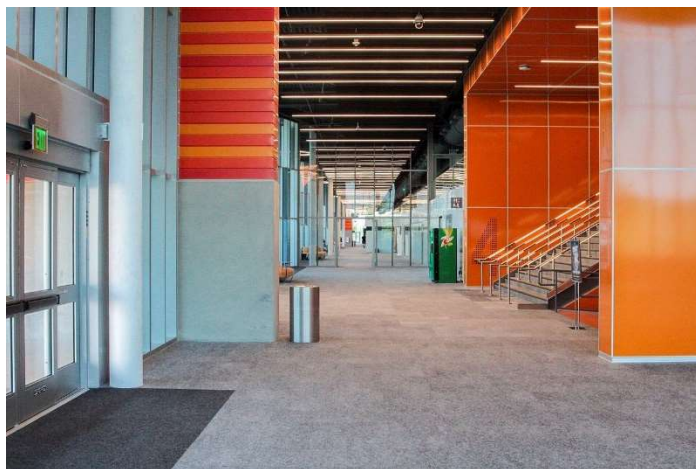
## 7. WARRANTY

### Limited Surface Warranty

NUDO warrants all porcelain enameled CeramicSteel a3 panels used for interior applications to be free from defects in materials and workmanship for the periods set forth herein. This limited warranty is valid from the date of shipment.

### Surface: 10-year limited warranty

NUDO warrants that surfaces, under product limited atmospheric conditions and when sealed from moisture, will not fade, stain, discolor, craze, crack, flake, corrode or peel for a period of 10 years. Panel Construction: Warranty does not cover: Materials and services supplied by purchaser or a third party in connection with the fabrication, installation, or maintenance of the product (including, but not limited to, adhesives, sealing agents, substrates, and lamination). Contact NUDO for details.



### Panel Construction: 5-year limited warranty

NUDO warrants that panels, under product limited atmospheric conditions and when sealed from moisture, will not delaminate from the substrate or warp for a period of 5 years.

Warranty does not apply to product failure or loss resulting from:

- Failure to apply, install or maintain the product at all times in such a way that the back-panel substrate and all exposed edges and joints are protected from moisture exposure
- Failure to laminate to sufficiently rigid substrate
- Normal wear and tear
- Abuse, misuse, vandalism or accident
- Alteration or modification of the product
- Faults in underlying structure or panel attachment

## 8. MAINTENANCE

No special maintenance is required. Panels can be cleaned with detergent or solvent. Refer to the manufacturer's Product Care and Cleaning Instructions for details.

## 9. TECHNICAL SERVICES

Technical assistance, including detailed information, product literature, test results, project lists and assistance in preparing project specifications is available from NUDO.

## 10. FILING SYSTEMS

Additional product information is available from NUDO upon request.

We believe all information given is accurate. It is offered in good faith, but without guarantee. Since conditions of use are beyond our control, the user assumes all risks. Nothing herein shall be construed as a recommendation for use that infringes on valid patent or as extending a license under valid permit.