

A Flat, Durable, and Moisture  
Resistant Class A Fire-Rated  
Panel



#### Nudo PolyMetal™/Multi-Panel Technical Data

Nudo PolyMetal™/Multi-Panel is comprised of a recycled thermoplastic core sandwiched between two sheets of finished aluminum on one or two sides. The recycled thermoplastic core is moisture resistant. PolyMetal™/Multi-Panel can be used in a multitude of applications including interior and exterior architectural, as well as sign panels. PolyMetal™/Multi-Panel is Class A fire rated and UL Tested.

Physical Properties: Table 1

| Property                                | Typical Value           |                          | Test Method  |
|---|-------------------------|--------------------------|--------------|
| Surface Burn Test                       | ≤ 0 Class A             | N/A                      | ASTM E84     |
| Smoke Development                       | ≤ 0                     | N/A                      | ASTM E84     |
| Flexural Strength                       | 10,208                  | psi                      | ASTM D790    |
| Flexural Modulus                        | 1,414,164               | psi                      | ASTM D790    |
| Flexural Load                           | 41.8                    | lbf                      | ASTM D790    |
| Tensile Strength                        | 4,084                   | psi                      | ASTM D638    |
| Tensile Modulus                         | 500,353                 | psi                      | ASTM D638    |
| Elongation                              | 22.8                    | %                        | ASTM D638    |
| Specific Gravity                        | 1.17                    | 50% Humidity Temp -23° C | ASTM D792    |
| Izod Impact                             | 5.7512                  | Ft-lbs/in.               | ASTM D256    |
| Water Absorption                        | 0.019%                  | 24 hrs. @ 23° C          | ASTM D570    |
| Coefficient of Linear Thermal Expansion | 4.31 X 10 <sup>-5</sup> | 50% Humidity Temp -23° C | ASTM D696-03 |

**Physical Properties: Table 2**

| Part Number Identifier             | Color             | Nominal Skin Thickness | Nominal Panel Thickness | Nominal Panel Weight | Size                 | Finished Sides |
|------------------------------------|-------------------|------------------------|-------------------------|----------------------|----------------------|----------------|
| PM1-120BC-[SIZE]-D-WH-MULTIPANEL   | White             | .008"                  | .118"<br>(3mm)          | 1.0# psf             | 4'X8', 10'<br>5'X10' | Double         |
| PM1-120BC-[SIZE]-PF1-WH-MULTIPANEL | White Gloss/Prime | .008"                  | .118"<br>(3mm)          | 1.0# psf             | 4'X8', 10'           | Single         |
| PM1-240BC-[SIZE]-D-WH-MULTIPANEL   | White Gloss/Gloss | .008"                  | .236"<br>(6mm)          | 1.6# psf             | 4'X8', 10'           | Double         |

**Composition:** Double sided aluminum overlay panel with solid HDPE core available with polyester paint finish on one or both sides.

**Preconditioning:** Prior to installing PolyMetal/Multi-Panel, remove the packaging materials and allow the panels to acclimate to room temperature and humidity for at least 48 hours. Ideally, the room temperature and humidity during acclimation and installation should be the same as the final operational conditions. DO NOT REMOVE PROTECTIVE FILM FROM PANEL SURFACE UNTIL AFTER INSTALLATION AND AT OPERATIONAL TEMPERATURE CONDITIONS.

**Product Limitations when used as a Sign Panel:** PolyMetal™/Multi-Panel is comprised of a recycled thermoplastic core sandwiched between two sheets of finished aluminum on one or two sides. The recycled thermoplastic core is moisture resistant. Prior to printing on PolyMetal™/Multi-Panel, a surface tension test should be performed to measure surface energy. Non-compliance with product limitations may affect future performance and voids warranty.

RESPONSIVENESS

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#### **Finished Panel Quality, Fabrication & Handling**

- The front side shall be smooth.
- The backside shall be a smooth or primer finish. Backside imperfections which do not affect functional properties are not cause for rejection.
- Physical properties shall be set forth in Table 1.
- Product quality standards and tolerance for panel weight and thickness shall be set for in Nudo Product, Inc. Quality Control Procedures/Standards which are available upon request.
- Panel dimensional tolerances will be:
  - Width: +0" – 1/8" (4mm)
  - Length: ± 1/8" (4mm)
  - Squareness: 1/8" (4mm) in 48" (1.2m).
- Please refer to NUDO PolyMetal™ Installation Guidelines for cleaning instructions.
- Panels can be installed and fabricated using best practices for use of tools and techniques. Carbide-tipped tools are recommended, as well as safety equipment. Eye protection and filtered mask should be worn during cutting and trimming operations.
- Panels shall be installed in accordance with the manufacturer's guidelines as set forth in the installation guide.

**Storage:** PolyMetal/Multi-Panel should be stored horizontally indoors on a contiguous flat surface, in a dry location. Panels should never be stored on the floor. Exposure to extreme humidity or being submersed in water prior to installation may cause moisture damage. Standing water on surface of panels prior to installation may cause color distortion. Optimum storage conditions are 60°F (16°C) to 75°F (24°C) and 35% to 55% relative humidity.

**Flame Spread and Smoke Development Ratings:** The numerical flame spread, and smoke development ratings are not intended to reflect hazards presented by Nudo Product, Inc. products or any other material under actual fire conditions. These rating are determined by small-scale tests conducted by Underwriters Laboratories and other independent testing facilities using the American Society for Testing and Materials E-84 test standards (commonly referred to as the "Tunnel-Test"). NUDO PRODUCTS, INC PROVIDES THESE RATING FOR MATERIAL COMPARISION PURPOSES ONLY. Like other organic building materials, (e.g. wood), panels made up of composite material will burn. When ignited, it may produce dense smoke very rapidly. All smoke is toxic. Fire safety requires proper design of facilities and fire suppression systems, as well as precautions during construction and occupancy. Local codes, insurance requirements and any special needs of the product user will determine the correct fire-rated interior finish and fire suppression system necessary for a specific installation.

**Disclaimer:** 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. Nothing herein shall be construed as a recommendation for use or as extending a license under valid patent.

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