

LumiSplash is a patent pending, multilayered, ultra-thin 1/4 inch (6 mm) decorative laminate that emits light evenly across its surface and has impressive impact, scratch, chemical, and abrasion resistant properties. LumiSplash is:

- The first ultra-thin, lighted laminate system with no air gap required for LEDs. This system uses a Light Bar and Light Guide panel to produce luminance across a translucent surface.
- A one-of-a-kind product that combines art with lighting in a durable laminate, creating a unique focal point for any home or business.
- Available in kit form with all the necessary hardware supplied for installation. Compared to other products on the market that require extensive fabrication and set up, LumiSplash save time and money.
- Suitable for most vertical and horizontal applications where other decorative laminates could be used.
- Easily fabricated with standard woodworking tools such as routers, saws, and drills.
- Easily used to backlight your own stone, acrylic, or other translucent materials with its Light Guide Panel.

SECTION 06 4116

EDGE LIT PLASTIC PANELS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Composite Plastic Panel System.
- B. Panel Frame.
- C. Accessories.

1.2 RELATED SECTIONS

- A. Section 06 1000 - Rough Carpentry.
- B. Section 06 2000 - Finish Carpentry.
- C. Section 06 4100 - Architectural Wood Casework.
- D. Section 09 2116 - Gypsum Board Assemblies.
- E. Section 10 1400 - Signage and Art.
- F. Section 12 1000 - Art.
- G. Section 12 3600 - Countertops.

H. Section 26 5100 - Interior Lighting.

1.3 REFERENCES

A. ASTM International (ASTM):

1. ASTM D 256: Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
2. ASTM D 570: Standard Test Methods for Water Absorption of Plastics.
3. ASTM D 696: Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics between -30 degrees C and 30 degrees C with a Vitreous Silica Dilatometer.
4. ASTM D 792: Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
5. ASTM D 2583: Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
6. ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials.

B. National Electrical Manufacturers Association (NEMA):

1. NEMA LD3: High-Pressure Decorative Laminates.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 3000.

B. Product Data: Include manufacturer's technical data sheets and published instruction instructions.

C. Shop Drawings: Fully dimensioned shop drawings showing layouts and components, including edge conditions, substrate construction, and cutouts and holes. Include elevations, section details, and large scale details. Indicate color, pattern, and finish selections.

D. Verification Samples: For each product specified, two samples, representing actual product, color, and patterns

E. Maintenance Data: Manufacturer's published maintenance manual with closeout submittals.

1.5 QUALITY ASSURANCE

A. Manufacturer: Minimum of 5 years' experience producing similar products.

- 1.6 DELIVERY, STORAGE, AND HANDLING
- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
 - B. Storage and Handling: Comply with manufacturer's recommendations for storage and handling. Protect from weather damage.
 - C. Handling: Handle materials to avoid damage.
- 1.7 PROJECT CONDITIONS
- A. Preconditioning: Acclimatize products for a minimum of 24 hours prior to fabrication. Precondition to occupancy conditions.
- 1.8 WARRANTY
- A. Warranty: Provide manufacturer's standard limited warranty against defects in manufacturing.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: ATI Decorative Laminates, 6106 West Market Street, Greensboro, NC 27409. Toll Free: 800-849-1320. Tel: 336-668-0488. Fax: 336-668-0713. Email: info@advtechnology.com. Web: www.atilaminates.com.

2.2 PLASTIC PANEL SYSTEM

- A. Basis of Design: Lumisplash: Composite panel system of FRP surface layer and printed acrylic light guide layer, heat sink, and reflector.
- B. Surface Layer: LuxCore FRP Panel.
 - 1. Chemical, stain, impact, scratch, and abrasion resistant.
- C. Light Guide Layer: Acrylic sheet digitally printed with proprietary diamond pattern for even luminance across the surface.
 - 1. Thickness: [3/16 inches (4.76 mm)] [____].
- D. Panel Height: [6 inches (152 mm)] [16 inches (406 mm)] [24 inches (610 mm)] [48 inches(1219 mm)] [____].

- E. Panel Length: [48 inches (1219 mm)] [96 inches (2438 mm)] [__].
- F. Panel Thickness: [1/4 inches (6.4 mm)] [____].
- G. Configuration: [Single-sided] [Double-sided].
- H. Pattern: [____] [Custom].
- I. Frame: [None] [Wood] [Snap] [Channel] [Welded] [Custom:].
- J. Mounting: [____].
- K. Lightbar: [12 Volt] [24 Volt] LED:
 - 1. Approximately 1000 lumen output per 2 foot section.
 - 2. 50,000 hours of uninterrupted use.
- L. LuxCore Properties:
 - 1. Barcol Hardness (ASTM D 2583): 40.
 - 2. Notched Izod Impact Resistance (ASTM D 256): 7.0 ft-lbs/in.
 - 3. Thermal Coefficient of Lineal Expansion (ASTM D 696): 0.0000160 in/in/F.
 - 4. Water Absorption (ASTM D 570): 0.17 percent.
 - 5. Specific Gravity (ASTM D 792): 1.53.
 - 6. Fire Rating (ASTM E 84): 0.045 inch thickness, Class A; 0.060 inch and above, Class C.
 - 7. Abrasion (NEMA LD3-2005): 9,150 cycles.

2.3 ACCESSORIES

SPECIFIER'S NOTE: DELETE ACCESSORIES NOT REQUIRED.

- A. Edge Profile: 1-1/2 inch (38 mm) welded and powder coated.
- B. Dimmers: Provide adjustable lighting levels.
- C. Filters: Adjust color temperature.
- D. Battery Powered System: UL listed.
- E. Transformers: UL listed.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Commencement of work will constitute acceptance of existing conditions and surfaces to receive the work.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved submittals.

3.4 CLEANING AND PROTECTION

- A. Clean plastic panel systems according to manufacturer's printed care and maintenance instructions.
- B. Protect installed products and finish surfaces from damage during remainder of construction period.

END OF SECTION