

	Technical Data	Code:	D-TC-040
		Revision:	01
	Marlite Standard FRP - FM Wall Panel and Ceiling Tile - Class A – Pebbled and Smooth	Effective since:	6-Sep-2024
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1. Product description.

FM Approved Marlite Fiberglass Reinforced Plastic (FRP) Wall Panels and Ceiling Tile, manufactured by Marlite, are available in textured and smooth surfaces, provide ultimate durability, satisfying the most demanding applications. Marlite Standard FRP-FM panels and ceiling tiles will not mold, mildew, rot or corrode. Marlite Standard FRP-FM panels and ceiling tiles are engineered to provide durability, easy cleaning and maintenance.

2. Purpose.

Marlite Standard FRP panels and ceiling tiles are designed for indoors wall finishes that require a FM Approved fire rating product under the Approval Standard 4880. Marlite Standard FRP panels and ceiling tile applications range from restaurants and supermarkets to restrooms and storage areas.

3. Physical Properties - Typical Values

0.090in Nominal Thickness		
Property	Value	Test Method
Flexural Strength	18,000 psi	ASTM D790
Flexural Modulus	1.69×10^5 psi	ASTM D790
Tensile Strength	5,000 psi	ASTM D638
Tensile Modulus	6.86×10^5 psi	ASTM D638
% Elongation	1.08 %	ASTM D638
Izod Impact	4.38 ft-lb/in	ASTM D256
Coefficient of Linear Thermal Expansion	2.91×10^{-5} in/in/°F	ASTM E831
Barcol Hardness ¹	35	ASTM D2583
Abrasion Resistance	0.405 % Wt. Loss	Taber Test
Water Absorption	0.586 % - 72 hr @ 74°F	ASTM D570
Specific Gravity	1.807	ASTM D792
Flame Spread	≤ 25	ASTM E84
Smoke Density	≤ 450	ASTM E84

Note:

1. ASTM standard has been discontinued without replacement by the ASTM Sponsoring Committee responsible for the Standard. ASTM makes withdraw standards available for informational purposes.

4. Selections

a. Wall Panel

Nominal Thickness	Finish	Color	Sizes
0.090 in	Pebbled	White Almond Ivory Beige Light Gray Silver	4 ft x 8 ft 4 ft x 9 ft 4 ft x 10 ft 4 ft x 12 ft
	Smooth	White	
0.075 in	Pebbled / Smooth	White	4 ft x 8 ft 4 ft x 9 ft 4 ft x 10 ft 4 ft x 12 ft

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b. Ceiling Tile

Nominal Thickness	Finish	Color	Sizes
0.090 in	Pebbled / Smooth	White	2 ft x 4 ft 4 ft x 4 ft

5. Standard Specifications

- Marlite Standard FRP-FM panels conform to the specification set on ASTM D5319:
 - Flammability Classification: Class A - Flame spread index 0 to 25, smoke development index of 450 or less.
 - Thickness classifications:
 - Grade 5—0.067 to 0.083 in. (1.70 to 2.11 mm); 0.075 in. nominal (1.91 mm).
 - Grade 6—0.081 to 0.099 in. (2.06 to 2.51 mm); 0.090 in. nominal (2.29 mm).
 - Size (Length and Width): Specified length and width $\pm 1/8$ in.
 - Squareness: $\pm 1/8$ in.
 - Thickness: Specified thickness ± 10 %.
- Color: Panel color shall be per specification. Within 1 dE of the specified color using the CIELab scale.
- Panels shall have a pebbled texture or smooth texture front side. Panel backside is smooth and may possess slight imperfections that do not adversely affect performance or physical properties and are not cause for rejection.
- Panels shall be installed in strict accordance with Marlite Standard FRP- panel Installation Instructions.

6. Approvals and Certifications

- Manufactured on an ISO 9001 Certified plant.
- Approved Product under FM Approval Standard 4880 - Class 1 Fire Rating of Building Panels or Interior Finish Materials
- Meets minimum requirements of major model building codes for Class A interior wall and ceiling finishes of flame spread ≤ 25 , smoke developed index 450 or less (per ASTM E84).

7. Storage Recommendations

- Store panels indoors in a cool, dry, well-ventilated area.
- Panels should be stacked on skids not more than 5 skids high.
- Do not allow moisture to collect on or in-between panels.

8. Installation Overview

- Safety: Use eye protection. Wear filter mask to cover nose and mouth, especially when cutting panels.
- Tools Required: Power saw (carbide tip), saber saw (metal cutting blade), caulking gun, tape measurer, drill, file, hammer, level, sawhorses and supports.
- Preparation: It is important to store Marlite Standard FRP-FM flat on a clean, dry surface for 24 hours before installation. It is preferable to store them inside the actual area of installation or, at least, under similar climate conditions. Walls must be clean and free of all substances. Level any high or low spots on walls. Concrete block walls may require a leveling coat of plaster or other similar material.
- Inspection: Carefully inspect all panels prior to installation. If any portion of material does not provide an acceptable appearance, Marlite should be notified immediately. Upon verification of unacceptability, that portion of material will be replaced by Marlite. Marlite's responsibility is for the replacement of defective materials but not for labor or other handling or installation expenses.
- Limitations: Marlite Standard FRP-FM panels shall maintain its performance characteristics and physical properties in temperatures ranging from -40°F to 130°F. Marlite Standard FRP-FM panels may discolor near heat sources such as: ovens, fryers, heat lamps and toasters, where temperatures exceed 130°F.

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