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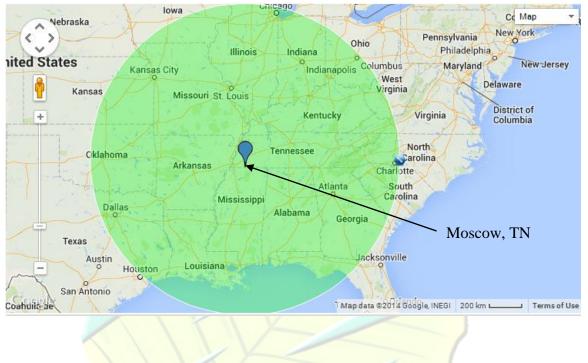
LEED Information

Product: Fiberboard Reinforced Plastic (FRP) Panels (Standard FRP, Symmetrix, Induro, Artizan, Envue FRP)

SECTION	DESCRIPTION	MATERIALS
MR Credit	Recycled Content: 10% (post-consumer + $\frac{1}{2}$ pre-	0% Pre-consumer
4.1	consumer) Use Materials with recycled content	0% Post-Industrial
4.1	such that the sum of post-consumer recycle content	070 FOSt-Industrial
	plus one-half of the pre-consumer content	
	constitutes at least 10% (based on cost) of the total	
MD Creadit	value of the materials in the project.	0% Pre-consumer
MR Credit 4.2	Recycled Content: 20% (post-consumer + ¹ / ₂ pre-	
4.2	consumer) Use Materials with recycled content	0% Post-Industrial
	such that the sum of post-consumer recycle content	
	plus one-half of the pre-consumer content	
	constitutes an additional 10% beyond MR Credit	
	4.1 (total of 20%, based on cost) of the total value	
MD Carel's	of the materials in the project.	See Chart below
MR Credit	Regional Materials: 10% Extracted, Processed &	See Chart below
5.1	Manufactured Regionally. Use building materials	
	or products that have been extracted, harvested or	
	recovered, as well as manufactured, within 500	
MD Caralit	miles of the project site.	
MR Credit	Regional Materials: 20% Extracted, Processed &	See Chart below
5.2	Manufactured Regionally. Use building materials	
	or products that have been extracted, harvested or	
	recovered, as well as manufactured, within 500	
MD Cardit C	miles of the project site.	Description of an and a site site
MR Credit 6	Rapidly Renewable Materials: Use rapidly	Does not currently meet criteria
	renewable building materials and products (made	
	from plants that are typically harvested within a	
MR Credit 7	ten-year cycle or shorter). Certified Wood: Use a minimum of 50% of wood-	Does not currently meet criteria
MR Cleuit /		Does not currently meet criteria
	based materials and products, which are certified in	
	accordance with the Forest Stewardship Council's	
	(FSC) principles and criteria for wood building	
EQ Cradit 1 1	components. Low-Emitting Materials: Composite Wood &	No oddod ymae formoldebyde reging
EQ Credit 4.4	5 1	No added urea-formaldehyde resins
	Agrifiber Products. Composite wood and agrifiber	
	products used on the interior of the building	
	(defined as inside of the weather-proofing system)	
	shall contain no added urea-formaldehyde resins.	

EQ Credit 10	Mold Prevention: Project Teams must achieve the	ASTM D6329-98
	following credits: EQ Credit 3.1: Construction IAQ	Resists fungal and mold contaminants
	Management Plan: During Construction, EQ Credit	
	7.1: Thermal Comfort: Design, EQ Credit 7.2:	
	Thermal Comfort. Verification and provide HVAC	
	systems and controls designed to limit space	
	relative humidity to 60% of less during all load	
	conditions, both occupied and unoccupied.	

500 Mile Radius Chart



CERTIFICATE OF COMPLIANCE



PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818

Marlite Standard FRP

25573-410 Certificate Number

06/15/2012 - 06/15/2021

Certificate Period

Certified

Status

UL 2818 - 2013 Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Wall finishes are determined compliant using an Office Environment with an air change of 0.68 hr⁻¹ and a loading of 33.40 m².

Products tested in accordance with UL 2821 test method to show compliance to emission limits in UL 2818, Section 7.1.



GREENGUARD Certification Criteria for Building Products and Interior Finishes

Criteria	CAS Number	Maximum Allowable Predicted Concentration	Units
TVOC(A)	-	0.50	mg/m³
Formaldehyde	50-00-0	61.3 (50 ppb)	µg/m³
Total Aldehydes (B)	-	0.10	ppm
Particle Matter less than 10 μm $_{\text{(C)}}$	-	50	µg/m³
4-Phenylcyclohexene	4994-16-5	6.5	µg/m³
Individual VOCs (D)	-	1/10th TLV	-

(A) Defined to be the total response of measured VOCs falling within the C₆ – C₁₆ range, with responses calibrated to a toluene surrogate. Maximum allowable predicted TVOC concentrations for GREENGUARD (0.50 mg/m³) fall in the range of 0.5 mg/m³ or less, as specified in CDPH Standard Method v1.1.

- (B) The sum of all measured normal aldehydes from formaldehyde through nonanal, plus benzaldehyde, individually calibrated to a compound specific standard. Heptanal through nonanal are measured via TD/GC/MS analysis and the remaining aldehydes are measured using HPLC/UV analysis.
- ^(C) Particle emission requirement only applicable to HVAC Duct Products with exposed surface area in air streams (a forced air test with specific test method) and for wood finishing (sanding) systems.
- (D) Allowable levels for chemicals not listed are derived from 1/10th of the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).



CERTIFICATE OF COMPLIANCE



Marlite

Standard FRP

25573-420 Certificate Number

06/15/2012 - 06/15/2021

Certificate Period

Certified

Status

UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2017 using a Classroom Environment with an air change of 0.82 hr⁻¹ and a loading of 94.60 m². ; and Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2017 using an Office Environment with an air change of 0.68 hr⁻¹ and a loading of 33.40 m².

Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.



Criteria	CAS Number	Maximum Allowable Predicted Concentration	Units
TVOC (A)	-	0.22	mg/m³
Formaldehyde	50-00-0	9 (7.3 ppb)	µg/m³
Total Aldehydes (B)	-	0.043	ppm
4-Phenylcyclohexene	4994-16-5	6.5	µg/m³
Particle Matter less than 10 μm $_{\text{(C)}}$	-	20	µg/m³
1-Methyl-2-pyrrolidinone (D)	872-50-4	160	µg/m³
Individual VOCs (E)	-	1/2 CREL or 1/100th TLV	-

GREENGUARD Gold Certification Criteria for Building Products and Interior Finishes

(A) Defined to be the total response of measured VOCs falling within the C6 – C16 range, with responses calibrated to a toluene surrogate. Maximum allowable predicted TVOC concentrations for GREENGUARD Gold (0.22 mg/m³) fall in the range of 0.5 mg/m³ or less, as specified in CDPH Standard Method v1.2.

(B) The sum of all measured normal aldehydes from formaldehyde through nonanal, plus benzaldehyde, individually calibrated to a compound specific standard. Heptanal through nonanal are measured via TD/GC/MS analysis and the remaining aldehydes are measured using HPLC/UV analysis.

^(C) Particle emission requirement only applicable to HVAC Duct Products with exposed surface area in air streams (a forced air test with specific test method) and for wood finishing (sanding) systems.

^(D) Based on the CA Prop 65 Maximum Allowable Dose Level for inhalation of 3,200 µg/day and an inhalation rate of 20 m³/day

(E) Allowable levels for chemicals not listed are derived from the lower of 1/2 the California Office of Environmental Health Hazard Assessment (OEHHA) Chronic Reference Exposure Level (CREL) as required per the CDPH/EHLB/Standard Method v1.2 and BIFMA level credit 7.6.2 and 1/100th of the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).

