

LEED STATEMENT

CLAY LIME PLASTER RAMMED EARTH WITH AQUAWAX

The LEED® Green Building Rating System is a set of performance standards based on existing and proven technology, to evaluate environmental performance from a whole building perspective over a building's lifecycle. They provide a definitive standard for what constitutes a green building in design, construction and operation.

Prerequisites and credits for LEED® address seven topics; sustainable site development, water efficiency, energy and atmosphere, material and resources, indoor environmental quality, innovation in design, and regional priority. Armourcoat products qualify for LEED® points in two key areas; materials and resources and indoor environmental quality. However, it is worth noting that LEED® guidelines vary from one LEED® program to another. Not all LEED® programs are the same. Categories may change; therefore it is always recommended that you consult with the GBCI (Green Building Certification Institute) prior to making final selections.

DISCLAIMER: Please be aware that this document is a guide developed independent of the LEED® program and is not a guarantee of points being awarded to the project. Specific design and variables are the responsibility of the project design team.

This LEED Statement pertains to the Armourcoat Clay Lime Plaster system which is protected with Aquawax. Individual products used to comprise this system are per the list below:

K40 Primer
Clay Lime Plaster P110
Marble Chips
Aquawax
Water

LEED V3/2009

RECYCLED CONTENT - MRC4 | POSSIBLE 2 POINTS

Requirements

Use materials, including furniture and furnishings, with recycled content such that the sum of post-consumer recycled content plus 1/2 of the pre-consumer content constitutes at least 10% or 20%, based on cost, of the total value of the materials in the project. The minimum percentage materials recycled for each point threshold is as follows:

RECYCLED CONTENT	POINTS
10%	1
20%	2

The recycled content value of a material or furnishing is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

PRODUCT	POST-CONSUMER CONTENT (%)	PRE-CONSUMER CONTENT (%)	CALCULATED VALUE
K40 Primer	0%	0%	0%
Clay Lime Plaster P110	0%	70%	35%
Marble Chips	0%	100%	50%
Aquawax	0%	0%	0%

WEIGHT AVERAGE RECYCLED CONTENT FOR ENTIRE SYSTEM:

SYSTEM	POST-CONSUMER CONTENT (%)	PRE-CONSUMER CONTENT (%)	CALCULATED VALUE
CLAY LIME PLASTER – RAMMED EARTH WITH AQUAWAX	0%	76%	38%

LOW-EMITTING MATERIALS - PAINTS AND COATINGS - EQC4.2 | POSSIBLE 1 POINT

Requirements

Paints and coatings used on the interior of the building (i.e., inside of the weatherproofing system and applied onsite) must comply with the following criteria as applicable to the project scope:

Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993.

Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L (2 lb/gal) established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997.

Clear wood finishes, floor coatings, stains, primers, sealers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

PRODUCT	PRODUCT TYPE	REFERENCE STANDARD	VOC LIMIT (G/L MINUS WATER)	PRODUCT VOC (G/L)
K40 Primer	Primers, Sealers and Undercoaters	SCAQMD Rule 1113, Amended July 9, 2004	200	<1
Clay Lime Plaster P110	Japans/Faux Finishing Coatings	SCAQMD Rule 1113, Amended July 9, 2004	350	<1
Marble Chips	Japans/Faux Finishing Coatings	SCAQMD Rule 1113, Amended July 9, 2004	350	0
Aquawax	Japans/Faux Finishing Coatings	SCAQMD Rule 1113, Amended July 9, 2004	350	<1

LEED V4

BUILDING PRODUCT DISCLOSURE AND OPTIMIZATION - SOURCING OF RAW MATERIALS | POSSIBLE 2 POINTS

Requirements

Option 2. Leadership extraction practices (1 point)

Use products that meet at least one of the responsible extraction criteria below for at least 25%, by cost, of the total value of permanently installed building products in the project.

Extended producer responsibility. Products purchased from a manufacturer (producer) that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility. Products meeting extended producer responsibility criteria are valued at 50% of their cost for the purposes of credit achievement calculation.

Bio-based materials. Bio-based products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard. Bio-based raw materials must be tested using ASTM Test Method D6866 and be legally harvested, as defined by the exporting and receiving country. Exclude hide products, such as leather and other animal skin material. Products meeting bio-based materials criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

Wood products. Wood products must be certified by the Forest Stewardship Council or USGBC-approved equivalent. Products meeting wood products criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

Materials reuse. Reuse includes salvaged, refurbished, or reused products. Products meeting materials reuse criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

Recycled content. Recycled content is the sum of postconsumer recycled content plus one-half the pre-consumer recycled content, based on cost. Products meeting recycled content criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

USGBC approved program. Other USGBC approved programs meeting leadership extraction criteria.

PRODUCT	POST-CONSUMER CONTENT (%)	PRE-CONSUMER CONTENT (%)	CALCULATED VALUE
K40 Primer	0%	0%	0%
Clay Lime Plaster P110	0%	70%	35%
Marble Chips	0%	100%	50%
Aquawax	0%	0%	0%

WEIGHT AVERAGE RECYCLED CONTENT FOR ENTIRE SYSTEM:

SYSTEM	POST-CONSUMER CONTENT (%)	PRE-CONSUMER CONTENT (%)	CALCULATED VALUE
CLAY LIME PLASTER – RAMMED EARTH WITH AQUAWAX	0%	75%	38%

LOW-EMITTING MATERIALS | POSSIBLE 3 POINTS

Requirements

This credit includes requirements for product manufacturing as well as project teams. It covers volatile organic compound (VOC) emissions in the indoor air and the VOC content of materials, as well as the testing methods by which indoor VOC emissions are determined. Different materials must meet different requirements to be considered compliant for this credit. The building interior and exterior are organized in seven categories, each with different thresholds of compliance. The building interior is defined as everything within the waterproofing membrane. The building exterior is defined as everything outside and inclusive of the primary and secondary weatherproofing system, such as waterproofing membranes and air- and water-resistive barrier materials.

Option 1. Product Category Calculations

Achieve the threshold level of compliance with emissions and content standards for the number of product categories listed in the excerpt below:

Category	Threshold	Emissions and content requirements:
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Interior paints and coatings applied on site	- At least 90%, by volume, for emissions; 100% for VOC content	- General Emissions Evaluation for paints and coatings applied to walls, floors, and ceilings - VOC content requirements for wet applied products
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General emissions evaluation. Building products must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.1–2010, using the applicable exposure scenario. The default scenario is the private office scenario. The manufacturer's or third-party certification must state the exposure scenario used to determine compliance. Claims of compliance for wet-applied products must state the amount applied in mass per surface area.

Manufacturers' claims of compliance with the above requirements must also state the range of total VOCs after 14 days (336 hours), measured as specified in the CDPH Standard Method v1.1:

- 0.5 mg/m³ or less;
- between 0.5 and 5.0 mg/m³; or
- 5.0 mg/m³ or more.

Standard referenced: CDPH/EHLB/Standard Method V1.2 (January 2017) "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" (aka CA Section 01350).

Product Description: **Armourcoat Clay Lime Plaster System**

TEST RESULTS COMPARISON TO STANDARD CRITERIA

Regulation or Protocol: CDPH

Conclusion: Pass

Regulation or protocol: CDPH Conclusion: Pass Version of regulation or protocol: CDPH/EHLB/Standard Method V1.2

ENVIRONMENT	CLASSROOM	OFFICE
Surface Area	94.6 m ²	33.4 m ²
TVOC	0.5 mg/m ³ or less	0.5 mg/m ³ or less

TVOC comparison is based on LEED BD+C: New Construction v4 (LEED v4), Indoor environmental quality (EQ) category/Low-emitting materials credit/Emissions and content requirements/General emissions evaluation.

Additional VOC content requirements for wet-applied products. In addition to meeting the general requirements for VOC emissions (above), on-site wet-applied products must not contain excessive levels of VOCs, for the health of the installers and other trades workers who are exposed to these products. To demonstrate compliance, a product or layer must meet the following requirements, as applicable. Disclosure of VOC content must be made by the manufacturer. Any testing must follow the test method specified in the applicable regulation.

All paints and coatings wet-applied on site must meet the applicable VOC limits of the California Air Resources Board (CARB) 2020, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective February 5, 2016.

PRODUCT	PRODUCT TYPE	REFERENCE STANDARD	VOC LIMIT (G/L MINUS WATER)	PRODUCT VOC (G/L)
K40 Primer	Primers, Sealers and Undercoaters	SCAQMD Rule 1113, Amended February 5, 2016	100	<1
Clay Lime Plaster P110	Faux Finishing Coatings: Trowel Applied Coatings	SCAQMD Rule 1113, Amended February 5, 2016	50	<1
Marble Chips	Faux Finishing Coatings: Trowel Applied Coatings	SCAQMD Rule 1113, Amended February 5, 2016	50	0
Aquawax	Faux Finishing Coatings: Decorative Coatings	SCAQMD Rule 1113, Amended February 5, 2016	350	<1