



# AMERICAN CLAY

Naturally Beautiful Walls

## The Environmental Impact of the Use of Earth Plasters and The LEED Credits Associated with American Clay Plaster

**American Clay** has a commitment to reviving the use of earthen plasters, which dates back thousand of years. Earth plasters are one of the original sustainable building products – created centuries ago by artisans utilizing the dirt from their home sites. Today, American Clay Earth Plaster’s formulation provides durable and beautiful finishes, which typically last for the life of the building. The combination of beauty, durability and healthful qualities has led to a renaissance in the use of these finishes over the past several years.

In recent years the construction industry has begun to focus on the environmental impact of many construction materials. The evaluation of products in the “green movement” encompasses many elements, which must be weighed on a scale of relative importance. These elements include the longevity of the material, the composition, maintenance, recycled content, embodied energy, and the “cradle-to-grave” environmental impact.

### **Durability**

Sustainable construction is the core value in the green building industry. American Clay Earth Plasters replicate the plaster walls utilized historically throughout the world. These plasters have an outstanding record of durability and performance dating back thousands of years. The walls will typically last the life of the structure. In many older buildings, the walls can be restored to their original beauty at a fraction of the cost of replacing the finish.

### **Composition and Embodied Energy**

American Clay is a blend of post-industrial aggregates, clays, and pigments. The post-industrial aggregates are comprised of rock and post-industrial shell waste crushed into sand. American Clay plasters do not require high-energy kilns or reactors like other plasters and acrylics. American Clay is the lowest embodied energy

choice for your project when used with our Mud Glue. Because of the low embodied energy in the manufacturing process, American Clay has the lowest carbon footprint of any interior finish product.

### **Recycle/Reuse Content**

Several marble quarries have supplies of post-industrial stone left from slab marble processing. American Clay utilizes these suppliers for our aggregates. American Clay uses 72% by weight post-industrial recycled content.

### **VOC Off-Gassing & Indoor Air Quality**

Our Earth Plasters, Sanded Primer, and Mud Glue are comprised of zero-VOC materials. American Clay Earth Plaster exhibits no off-gassing over the life of the cured walls. The porous clay plaster finish does not support microbial growth, and does not allow moisture to accumulate, helping to maintain a mold-free environment with improved indoor air quality. The use of Mud Glue further enhances the anti-microbial qualities of our natural finishes.

### **Local Sourcing**

American Clay has many distributors and retailers strategically located throughout the country. American Clay Earth Plasters are shipped dry to minimize the effects of our products on the environment; adding water at the factory would make our product heavier to ship. The heavier the shipment, the more fuel is used, and the more fuel used, the more greenhouse gases are produced.

### **Innovations for Future Generations**

American Clay is currently looking to other possible areas of benefits, including energy efficiencies produced by the clay.



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UNITED STATES GREEN BUILDING COUNCIL  
“Leadership in Energy and Environmental Design”

**American Clay** has been valued for its beauty and environmental friendliness. However some of the characteristics of American Clay that make it even more attractive are its durability, low maintenance and recycled content. American Clay Earth Plasters contribute to the US Green Build Council’s (USGBC) credits, under the LEED-NC rating system, version 2.2.

**MR Prerequisite 1: Storage & Collection of Recyclables Required (1 point)\***

Provide an area that is dedicated to collection and storage of non-hazardous materials for recycling.

\*All American Clay packaging is recyclable.

**MRcr2.1 and 2.2: Construction Waste Management (1 to 2 points)**

After applying American Clay Earth Plasters, any unused wet plaster should not be discarded. Dry it on plastic sheets and rehydrate it at a later date for touch ups and repairs.

**MRcr4.1 and 4.2: Recycled Content (1 to 2 points)**

If calculating by weight 35 % of recycled content is usable in this calculation. If calculating by volume 22% is usable in this calculation.

**MRcr5.1 and 5.2: Regional Materials (2 points possible)**

One point is awarded if 10% of the building materials used is extracted, harvested or recovered, as well as being manufactured within a 500-mile radius of the project site and the calculation is based on the cost of the total materials value. The marble dust and clays are available in one of New Mexico’s bordering states. American Clay can contribute to the credit if the raw material supplier is located within 500 miles of the project site. A second point is awarded if the total percentage of the cost of regional materials is at least 20%.

**MRcr6: Rapidly Renewable Materials (1 point)**

One point is awarded if 2.5% of the total value of all building material and products used in the project, based on the cost, is rapidly renewable materials. Using green chemistry, American Clay has developed a casein protein polymer based Mud Glue. Using American Clay Mud Glue can help contribute to this credit.

**EQcr4.2: Low-Emitting Materials (1 point)**

American Clay Earth Plasters, Sanded Primer, Mud Glue and Pigments all have 0 VOCs.

**IDcr1-1.4: Innovation in Design (1 point)**

Many things in nature hold a negative charge, and humans living close to nature are accustomed to being surrounded by a negative charge in the air, or negative ions. Inside today’s modern home there are electrical appliances, electric cords, and synthetic plastic products (latex paint), all of which produce and maintain a positive charge in the air. Surrounding your interior environment with clay that produces negative ions will not only help neutralize the electromagnetic effect created by appliances and synthetic plastics, but will help eliminate static charge on walls and floors, help filter air of pollen and dander, and surround you with the charge humans are accustomed to when living in nature.

Negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy. Normal ion count in fresh country air is 2,000 to 4,000 negative ions per cubic centimeter (about the size of a sugar cube). At Yosemite Falls, you’ll experience over 100,000 negative ions per cubic centimeter. On the other hand, the level is far below 600 negative ions per cubic centimeter in an office with computers. Earth Plasters can increase negative ions by 10 – 20 times more in the indoor air environment.

\*\*\* Points are only POSSIBLE – It is up to the builder/architect/owner to pursue approval of the points by USGBC