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PRODUCT INFORMATION

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DESCRIPTION

Tech-Dry earth render admixture system provides a decorative and protective render for earth structures and includes the following ingredients:

1. Dry earth render mix
2. EARTH BONDING EMULSION - binder
3. EARTHAID – water repellent admixture
4. Other ingredients such as colour oxides/pigments etc.
5. MUD BRICK WATER REPELLENT (for final finish) – water repellent sealer

EARTH BONDING EMULSION (or EBE) and EARTHAID are used as admixtures in earth render mixes to provide binding, adhesion and water resistance. MUD BRICK WATER REPELLENT (or MBWR) is used as the final protective finish after the wall is rendered to provide a durable exterior water repellent finish.

EBE is a PVA-based emulsion which has been specifically formulated to be used as an earth render admixture to provide bonding and adhesion. EBE imparts an excellent long-lasting bonding and adhesion to the earth render. It also provides flexibility to the earth render to reduce earth render cracks. EBE is also used as a primer or sealer to strengthen and dust-seal earth wall surfaces. EARTHAID is a water repellent admixture for earth renders. EARTHAID reacts with earth render ingredients to impart durable water resistance to the entire body of the earth render. MBWR is used as the final protective finish after the wall is rendered with the earth render. MBWR is a siloxane-based penetrating water-repellent sealer which provides excellent long-lasting water repellency to the render without affecting the surface appearance and permeability of the earth building.

USE INSTRUCTIONS

Dry Render Ingredients:

The render dry mix should be prepared as usual. If the dry earth mix has very high clay content, sand may be added into the earth mix to reduce the clay content in order to avoid possible cracking of the earth render.

Earth Render Formulation:

A render mix should be prepared according to the following formula (by volume):

Dry earth render mix	10 parts
EARTH BONDING EMULSION	2 parts
EARTHAID	0.4 parts
Water	to consistency

Preparing Earth Render Mix:

Measure each ingredient according to the above formula. Dilute EBE using 1 part EBE to 4 parts water and stir the diluted EBE solution into the dry earth mix. Let the earth mix soak in water for 30 minutes. Start stirring again and add enough water to produce the desired consistency. The correct consistency of the final render mix is that the mix should be a free flow slurry which can be easily applied to the earth wall with normal application methods. It may take time for the render mix to become a consistent and homogeneous render slurry.

APPLICATION

Alternatively, dilute EBE using 1 part EBE to 5 parts water, and use the diluted EBE solution as the gauging water to mix the earth render to the right consistency without adding extra water. Please note a lower dilution of EBE may be required if the original dry earth render is very moist.

Slowly stir EARTHAID into the above homogeneous render mix. Finally adjust the render mix with water or with a diluted EBE solution to the desired consistency. The render is now ready to use.

Before Application:

As most types of earth walls differ in construction and appearance, it is strongly advisable to perform a pilot test in a small inconspicuous area to determine the suitability of the earth render mix for the purpose. Some practice in preparing and applying earth render should also be allowed for.

Surface Preparation:

The surface to be treated should be dry, firm and free from grime, oil, surface coatings and laitance or other contamination. All cracks greater than 0.3 mm should be filled using proper materials and allowed to fully-cure before application.

Applications:

The earth render can be applied by most traditional methods such as brushes, brooms, rollers or airless spray. Choose your application method to obtain the best-textured finish. Adjust the consistency of the final render mix by water to best suit your application method.

Before applying earth render, the earth wall should be primed with a solution of 1 part EBE to 5 parts water. This helps to strengthen the earth wall surface and provide better adhesion between the mud brick wall and the render. The render should be applied when the primed wall surface is still wet. This will prevent the render drying too fast due to a permeable earth surface.

A minimum of two or more coats of earth render to a film thickness of 1 mm should be applied. The second coat should be applied after the first coat is dry. The render may take up to 24 hours to fully-dry depending on render mix, earth structures and weather conditions.

Do not apply the render if the ambient temperature is below 10oC or may fall below 10oC during the drying period after application.

Close the container of the remaining render mix to prevent the render drying within the container. The earth render mix can be stored for a short period but prolonged storage should be avoided.

After Render Application:

Wait until the render is fully-dried and then apply the top protective impregnant of MBWR. Follow the application instructions for MBWR. Two applications on the one occasion (wet in wet) are sufficient to obtain a good water repellent surface.

IMPORTANT NOTE

Due to the variation of building materials, it is strongly recommended that a pilot test in a small scale on site should be conducted prior to application to find out the suitability of EARTH RENDER ADMIXTURE SYSTEMS for the purpose. You may also contact Tech-Dry for the earth render admixture ingredients or for further information.