

PRODUCT INFORMATION

PLASTICURE

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Manufacturer's code: RPKR2

Updated: 01/01/2024

Product Name: PLASTICURE

Description: PLASTICURE is an innovative admixture for stabilised earth buildings. When PLASTICURE is incorporated into stabilised earth products, the permeability to water and the occurrence of unsightly efflorescence is virtually eliminated.

Recommended Uses: PLASTICURE is a water-repellent admixture designed to be incorporated in the manufacture of stabilised earth products including stabilised earth building materials, rammed earth walls containing cement or pressed concrete blocks. It may also be added into concrete pavers or other pressed concrete masonry or similar products. However, it is not recommended to be used in aerated concrete masonry or wet-mix mud brick. Some of the features of PLASTICURE pressed concrete include:

- Reduced water absorption and efflorescence by over 80%.
- Product remains permanently bonded to the substrate and cannot be washed out.
- Does not leave an oily residue on the masonry substrate.
- Easy to use in any existing processes.
- The degree of water resistance can be varied by changing the rate of addition.
- Water-based technology with no hazardous material emitted during use.

As masonry materials vary, it is always recommended that a test must be carried out prior to application to find out the suitability of this product for the purpose.

Use Instructions: It is important that the applicator should perform trials before application.

1. Dosage

The rate of addition depends on the specific mix design and the level of water repellency required. The usual dosage rate is approximately 0.5 litre of PLASTICURE per tonne (1000kg) of dry mix ingredients, or 1 litre per cubic metre.

2. Addition

PLASTICURE is designed to be added as part of the gauging water during the mixing process.

If a typical mix has 1000kg of dry ingredients, the procedure to incorporate 0.5 litre of PLASTICURE into this 1000kg of dry mix would be as follows:

- 1) Thoroughly mix all the rammed earth dry ingredients (1000kg) in a batch mixer.
- 2) Stir or mix PLASTICURE before use.
- 3) Measure out 0.5 litre of PLASTICURE and dilute it with 5 litres of clean water.
- 4) Spray the above-diluted emulsion into the dry mix while blending.
- 5) Blend the mix thoroughly while adding clean water to attain the desired consistency. The mix can now be processed as usual.

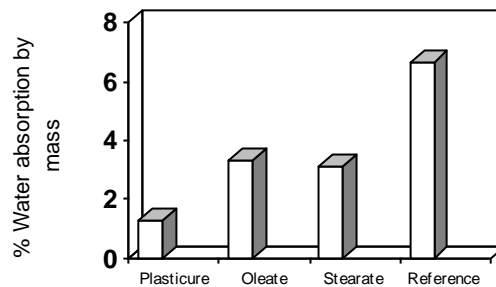
If your process is substantially different to that described above, please do not hesitate to contact the manufacturer or the sales agent for assistance.

Performance Tests

1. Reduction in Water Absorption

The pressed concrete substrate used for testing contains 18% cement and 82% graded sand and aggregates with PLASTICURE at a dosage rate of 0.5 lt/tonne. Commercial oleate and stearate water repellent admixtures were used as comparisons. The test substrates were initially covered with plastic for 24 hours in ambient conditions to obtain initial strength, followed by 28 days curing at ambient conditions before testing. Sponge capillary water absorption was conducted. The test results are shown in Figure 1. The performance of PLASTICURE is far superior to that of the reference and is much better than those of the substrates with oleate and stearate.

Figure 1. Reduction in Water Absorption



2. Controlling Efflorescence

The efflorescence test is conducted by laying above test substrates on a wet sponge placed in a solution containing 10% sodium sulphate. The top surface of the substrate was visually monitored for occurrence of efflorescence for 7 days. Table 1 indicates that efflorescence of the substrate treated with Plasticure was found to be virtually eliminated during the test period.

Table 1. Efflorescence Occurrence

Substrates	After 1 day	After 3 days	After 7 days
With PLASTICURE	No efflorescence	No efflorescence	Very limited efflorescence
Reference	100% saturated with the salt solution	-	-

Typical Data:

Appearance: Milky white liquid with slight odour
 Solids content: 50% by weight
 Specific Gravity: ca. 0.945 gm/ml
 pH value: 7-8
 Solubility in water: Miscible
 VOC content: Nil
 Flash point: >61°C

Important Note:

As conditions vary, it is recommended that a pilot trial should be carried out prior to using PLASTICURE to determine the suitability of this product for the purpose.

Handling & Storage:

PLASTICURE is a non-hazardous material. However, good industrial hygiene procedures should be followed when handling. The product should be stored in closed containers in a cool dry place away from any fire sources. The product has a shelf life of 12 months in a sealed container stored at a temperature below 25°C.

Packaging:

PLASTICURE is available in 20 and 200 litre plastic drums or 1,000 litre plastic bulky bins. Other size containers may be available on request.

Disclaimer:

The information given in this data sheet is based on many years of experience and is correct to the best of our knowledge. As the storage, handling and application of this material is beyond our control; we can only be responsible for the quality of our product at the time of dispatch. We reserve the right to alter certain product parameters within the spectrum of properties in order to keep abreast of technical advances. It is the responsibility of the end user to determine the suitability of this material for any particular application.