Mortar Analysis

Mortar testing and analysis identifies the binder materials, proportions, and the sand gradation of the original material. Isolating and identifying these characteristics makes it possible to create an accurate replacement formula that mirrors the original. Alternatively, if the original mortar performed poorly, mortar analysis identifies the imbalance in the mix so that the replacement formulation can be adjusted accordingly.

Mortar analysis is particularly beneficial for historic structures constructed between 1870 and 1930, when mortar formulations varied widely. (Portland cement production began in the United States in 1871, although it took much longer to enter mainstream mortar production.) It is also recommended for earlier masonry structures in which the mortar is believed to contain natural hydraulic lime or natural cement.

- *Precise, custom matched mortar for optimal results*
- *Results are kept on file so you can order custom mortar any time*
- *Replicates both the appearance and performance of the original mortar*
- *Allows for a replacement mortar that fits seamlessly into the wall.*
- *Ensures that the replacement material is compatible with the wall system-no spalling, cracking, or trapped water*
- *Service includes a written report, sand gradation chart, and a ten pound sample of replacement mortar*

Service Options:

Package A: The most comprehensive testing service we offer. Package A offers petrographic and chemical analysis to identify the proportions of the original binder and original sand in the mortar. Package A is recommended when it is necessary to distinguish between portland cement, natural cement and natural hydraulic lime.

Package B: This package offers an economical alternative to the extensive testing of Package A. Package B includes identification of the original binder and matching of the original sand with test methods developed by U.S. Heritage Group, Inc.

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