

Perlite Aggregate for Lightweight Tile Mortars

The widespread use of lightweight perlite aggregate replacing sand in tile mortars is easily understood when one studies the advantages that perlite has to offer. In addition to cost savings made possible by the reduction of labor fatigue, tile contractors are able to give their customers better installations.

ADVANTAGES OF LIGHTWEIGHT PERLITE AGGREGATE

1. lighter in weight
2. easier to handle and mix
3. easier to transport
4. less tiring to work with
5. clean and convenient to measure as perlite is supplied in bags
6. eliminates messy piles and waste of aggregate; unused portions are easily removed and can be used elsewhere
7. lightweight perlite aggregated tile mortars impose less dead load on structural members
8. since the perlite aggregate is bagged dry, thawing out is not necessary in winter as is the case with sand
9. tile mortars containing lightweight perlite aggregate are:
 - a. light in weight
 - b. heat and cold insulating
 - c. crack resistant
 - d. vermin proof
 - e. resilient
 - f. uniform quality
 - g. fireproof
 - h. sound insulating
 - i. moisture proof
 - j. easy to use
 - k. bondable

MORTAR INGREDIENTS

1. Cement: Portland cement, ASTM C-150, Type I (White Portland cement may be used.)
2. Perlite Aggregate: Perlite aggregates used for lightweight tile mortars shall weigh not less than 7 ½ nor more than 15 lbs. per cu. ft. and particle gradation shall conform to ASTM Specification C-35.
3. Lime: Hydrated, ASTM C-206 or C-207, Type S.
4. Water: Potable

ACCEPTED MIX PROPORTIONS FOR PERLITE TILE MORTARS

Always measure ingredients for tile mortars in the proportions of 12 qt. Buckets. A bucket ratio mix is easier to handle as well as being more accurate.

There are several accepted mix proportions in use by tile setters throughout the country. The most commonly used mix is tabled below:

PERLITE – LIME MORTAR MIX

Materials	No. of Buckets (12 qt. capacity)	Parts by Volume
1 bag Portland cement (94 lbs.)	2½	1
1 bag Perlite (4 cu. ft.)	10	4
1/2 bag Hydrated Lime	1¼	1/2

Thoroughly mix all ingredients dry and then add sufficient water to obtain desired consistency. Avoid use of excessive water.

The mix can be used for both the scratch coat, leveling coats and staling bed, allowing 48 hours for the scratch coat to set up. On a scratched and plumbed wall a softer consistency mortar is required than chat to be floated directly on a steeltex wire mesh or hardness cloth.

APPLICATION

It is recommended that a thin coating of neat Portland cement paste be troweled or brushed over each previously soaked and drained rile before it is installed on a lightweight perlite aggregated mortar bed. This skim coat assures a satisfactory bond.

Trowel cutting of the setting bed both vertically and horizontally is recommended every three or four courses of tile to prevent any possible cracking which may occur.

TILED CEILINGS

Bathroom and kitchen tile ceilings can also be installed with lightweight perlite aggregated tile mortars. It is less tiring to trowel the lightweight mortar on ceilings and much easier to handle.

REMODELING

Tile mortars containing lightweight perlite aggregate are especially suitable for remodeling. The reduced weight of the finished installations places a minimum of stress on old walls and building structure.



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Perlite Institute, Inc.
4305 North Sixth Street, Suite A, Harrisburg, PA 17110
717.238.9723 / fax 717.238.9985 / www.perlite.org