PORTLAND CEMENT-LIME
Types N and S
Custom Color

MANUFACTURER
CEMEX
3250 Linebaugh Road
Xenia, Ohio 45385
Customer Care Center 1-800-992-3696

PRODUCT DESCRIPTION
Richmortar Portland Cement-Lime is a factory blended product consisting of ASTM C150 portland cement and ASTM C207 (Type S) hydrated lime. These components are proportioned under controlled conditions for product consistency.

Color selection may be made through your local Richmortar representative.

Basic Use: Richmortar Portland Cement-Lime is specially formulated and manufactured to produce masonry mortar for use in brick, block, and stone masonry construction.

Types: Richmortar Portland Cement-Lime products are produced in Type N and Type S strength levels for use in preparation of ASTM Specification C270 Type N and Type S portland cement-lime mortars, respectively.

Availability: Richmortar Portland Cement – Lime is available in one cubic foot bags containing a plastic moisture barrier.

INSTALLATION
Proportioning: A bag of Richmortar Portland Cement–Lime when mixed with 2¼ to 3 cubic feet of sand meeting ASTM C144 “Aggregate for Masonry Mortar” will produce a mortar that meets the Proportion Specification requirements of ASTM C270 (Table 1).

A bag of Richmortar Portland Cement–Lime when mixed with 2¼ to 3½ cubic feet of sand meeting ASTM C144 “Aggregate for Masonry Mortar” will produce a mortar that meets the Property Specification requirements of ASTM C270 (Table 2).

Mixing: Machine mixing should be used whenever possible. First, add most of the water and half of the sand. Next, add the portland cement and lime with the rest of the sand. After one minute of continuous mixing, slowly add the rest of the water. Mixing should continue for at least three minutes; extending mixing up to five minutes improves mortar qualities.

No admixtures should be used without the written approval of the architect or engineer of record.

Water: All water should be clean and free from organic material and deleterious amounts of dissolved acids, alkalis and salts.

Retempering: To minimize retempering, mortar should not be mixed more than 15 minutes prior to use. Retempering will not adversely affect mortar quality if only evaporated water is replaced. Colored mortar should not be retempered.
Tooling of Joints: Tooling of mortar joints increases the density, durability and water tightness of the mortar surface. The moisture content of the mortar when tooled will affect the color; the drier the mortar, the darker its final color.

Table 1. Proportion Specification (Parts by Volume)

<table>
<thead>
<tr>
<th>Mortar Type</th>
<th>Portland Cement or Blended Cement</th>
<th>Hydrated Lime</th>
<th>Masonry Sand</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1</td>
<td>1/2 – 1 1/4</td>
<td>2 1/4 - 3</td>
</tr>
<tr>
<td>S</td>
<td>1</td>
<td>1/4 - 1/2</td>
<td>2 1/4 - 3</td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td>1/4</td>
<td>2 1/4 - 3</td>
</tr>
</tbody>
</table>

Table 2. Property Specification

Under the Property Specification, the cement-to-sand proportions are to be in the range of 1:2 1/4 to 1:3 1/2, and should meet the requirements outlined in Table 2.

<table>
<thead>
<tr>
<th>Mortar Type</th>
<th>Compressive Strength Min., psi (MPa)</th>
<th>Water Retention Minimum %</th>
<th>Air Maximum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>750 (5.2)</td>
<td>75</td>
<td>14</td>
</tr>
<tr>
<td>S</td>
<td>1800 (12.4)</td>
<td>75</td>
<td>12</td>
</tr>
<tr>
<td>M</td>
<td>2500 (17.2)</td>
<td>75</td>
<td>12</td>
</tr>
</tbody>
</table>

No changes should be made in the field to the laboratory established proportions for mortar that has been tested and accepted under the property specification, except for the quantity of mixing water.

Materials with different physical characteristics than those used in the laboratory should also not be used in the field without testing for compliance with the property specifications.

**WARRANTY**

CEMEX warrants that the products identified are in accordance with the appropriate current ASTM specifications. No one is authorized to make any modifications or addition to this warranty. CEMEX makes no warranty or representation either expressed or implied with respect to this product and disclaims any implied warranty of merchantability or fitness for a particular purpose.

As CEMEX has no control over the other ingredients mixed with this product or the final application, CEMEX does not and cannot warrant the finished work. The user is responsible for following industry standards and recommended practices.

In no event shall CEMEX be liable for direct, indirect, special, incidental or consequential damages arising out of the use of this product, even if advised of the possibility of such damages. In no case shall CEMEX’s liability exceed the purchase price of this product.

**PRECAUTIONS**

Freshly mixed cement, mortar, grout or concrete may cause minor skin irritations. Avoid direct contact with skin and eyes and if contacted, wash exposed areas promptly with water. Refer to the applicable CEMEX product MSDS prior to use which may be obtained by calling 1-800-99-CEMEX (1-800-992-3639).

**TECHNICAL SERVICES**

CEMEX personnel are available to provide technical assistance by contacting 1-800-99-CEMEX (1-800-992-3639).

**CEMEX**

U.S. Operations Headquarters
929 Gessner St., Suite 1900
Houston, Texas 77024
www.CEMEXUSA.com