

# Midcentury Portland-Lime Mortar

## Packaging

- 50 lb paper bag
- 50 lb pail
- 2,500# super sack (and silo)

## Yield

.45 cubic feet per 50lb bag (or pail) when mixed with water.

## Shelf Life

This product shall remain usable for up to 6 months in a sealed bag if kept dry and away from humidity and up to 1 year in a sealed pail.

## Appearance

Natural color is grey or white. Also available in 51 standard colors or can be custom blended with select sands and pigments for precise matching.

## Pot Life

Up to 2 hours if kept out of direct sun and heat. Do not retemper with additional water.

## Application at a Glance

Suitable for pointing mortar joints in most types of historic masonry (brick, terra cotta, limestone, granite, concrete, etc.).

## Application Limitations

- Not recommended for repointing extremely soft masonry units such as adobe, sandstone or brownstone. See our Maintain PHL 5.0 lime mortar.
- Should be installed in temperatures of 35 degrees Fahrenheit and rising for the first 3 days following installation.
- Maximum recommended temperature for installation is 85 degrees Fahrenheit.
- Do not apply with grout bags or grout guns.
- Do not wash with strong acidic cleaners or muriatic acid.

## Product Description

Midcentury Type O portland-lime mortar is a blended proprietary mixture of hydrated lime, Portland cement and sand. Midcentury Type O is a faster curing alternative to our Maintain PHL 5.0 lime mortar. It is suitable for repointing most types of historic masonry including brickwork, natural stone, terracotta and concrete units. Midcentury Type O is ideal for repointing or rebuilding below-grade masonry as well as cold walls such as chimneys, parapets or cheek walls where the masonry is subject to extreme weather conditions.

Midcentury Type O meets the requirements of ASTM C1714, Standard Specification for Preblended Dry Mortar Mix for Unit Masonry, and the property specifications for ASTM C270. The raw materials used in this product meet ASTM C150 (Standard Specification for Portland Cement), ASTM C207 (Standard Specification for Hydrated Lime for Masonry) and ASTM C144 (Standard Specification for Aggregate for Masonry Mortar).

## Product Highlights

- Improved frost durability of masonry
- Reduced spalling of masonry units
- High lime content increases water retention and reduces shrinkage
- Excellent bond strength to all masonry units
- Available in 51 standard colors
- Customizable to an unlimited variety of paste colors and sand blends
- Lower in compressive strength
- Higher in flexural strength
- Higher vapor permeability
- Helps promote wicking of moisture and salts out of masonry
- Reduces stress on masonry units caused by thermal movement

## Technical Data\*

Properties	Results	Requirement
Time of initial set		-
Time of final set		-
Air content	2.80%	
Water retention	80.90%	> = 75%
7-day compressive strength	510 psi	-
28-day compressive strength	680 psi	350 psi (minimum)

*\*The above test data is derived from laboratory controlled samples produced with grey cement, lime and mason sand (no pigment). Technical data may vary slightly depending on different cements, aggregates and pigments that are added.*



# Midcentury Type O Mortar Application Guide

## Wall Preparation

1. Carefully grind or chisel out mortar joints to a depth of at least 2 times the width of the joint, or deeper until sound original mortar is located. The minimum depth of thin joints is  $\frac{3}{4}$ ".
2. Remove all mortar fins left by the grinder from the top and bottom masonry units so pointing mortar obtains a direct bond to all units.
3. Remove all dust and debris from joints by vacuuming and then water rinsing to remove all laitance and ensure sound bonding.
4. Pre-wet the wall with copious amounts of water to achieve Saturated Surface Dry conditions (SSD). This wetting process inhibits the masonry units from absorbing the mortar's mix water which can cause rapid-drying and weakened mortar.
5. Protect the walls from high winds, direct sunlight and/or heat by tenting the area with dampened burlap.

## Mixing

1. Mortar can be mixed by hand or in an electric or gas powered mortar mixer.
2. Add water slowly while mixing. Mix for 5 minutes and add just enough water to make the mix workable.
3. Allow the mix to rest for a minute to allow the aggregate to absorb water. If the mix needs additional workability, continue slowly adding water and mix for another minute. Each batch of mortar must be mixed the same way with the same amount of water or there will be color inconsistencies between batches.
4. Mortar for repointing should be fairly dry so that shrinkage cracking does not occur during curing. Mortar for laying units should be slightly wetter.

## Installation

1. Compact mortar into joints using back fillers. Never use grout bags or pointing guns which require too wet of a mix which segregates the paste from the aggregate causes mortar shrinkage during curing.
2. Point deepest voids with mortar first so that all joints are of the same depth. Allow the mortar to set for 12 to 24-hours before final pointing takes place.
3. Point the rest of the joints with mortar in one lift. Apply mortar using medium pressure to best control mortar consolidation and permeability.
4. Tool joints when the surface of the mortar is thumb print hard.
5. We do not recommend brushing your work. Proper surface preparation, mixing, compaction and tooling will provide adequate bonding to the masonry units.
6. If using mortar in extremely sunny and/or hot climates, drape the scaffold with dampened burlap to shade the masonry during installation.

\*The final coloration of your mortar will depend significantly on your consistency in water content, mixing and curing. Timing of your tooling is also critical and can alter the final coloration of your joints.

## Curing

1. Although cement based mortars are more forgiving during the curing process than lime based mortars, it is still good practice to keep newly applied type "O" mortar consistently damp for at least the first three days of curing. By doing so, you will enhance the mortar's curing process which will provide for better durability and lessen the risk of shrinkage cracking.
2. Misting the wall several times a day is often sufficient for damp curing Maintain Type "O" Mortar. You can also drape dampened burlap over the area, raised 1-2 inches away from the wall.

## Washing & Sealing

1. Allow the mortar to cure for a minimum of 7 days (no more than 28 days) before washing masonry with an acidic cleaner.
2. Clean masonry with only a professional proprietary cleaning agent designed specifically for washing new masonry construction.
3. You may use a silane or Siloxane based masonry water repellent from a trusted manufacturer to apply to masonry laid or pointed with Maintain Type "O" mortar. Cold walls like parapets or chimneys are typically good locations to apply a masonry water repellent for added weather protection. NEVER USE A FILM FORMING SEALER OVER ANY MASONRY as this entraps moisture within the wall.

## Warranty

CenturyWerks, LLC. warrants this product to be of merchantable quality when used or applied in accordance with these instructions. This product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of the product (as purchased) if found to be defective. THIS LIMITED WARRANTY IS ISSUED AND ACCEPTED IN LIEU OF ALL OTHER EXPRESSED WARRANTIES AND EXPRESSLY EXCLUDES LIABILITY FOR CONSEQUENTIAL DAMAGES.

### About CenturyWerks LLC

We believe in the proper restoration of timeless architecture with enduring craftsmanship that uses a refined approach to restoration. Derived from over 135 years of masonry materials experience, CenturyWerks, LLC manufactures a full line of premium masonry, concrete and plaster repair products under three lines:

- Conserve: For patching & sculpting historic masonry
- Maintain: For repointing historic or specialty masonry
- Repair: For restoring historic or unique concrete

For more information on CenturyWerks, its unique services, product lineup and demonstration videos, visit [centurywerks.com](http://centurywerks.com).

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