



Saylor's Portland Cement

Packaged Portland Cement

Providers of Quality Products and Technical Support for:

Portland and Blended Cements,
Slag, and Fly Ash

BRIXMENT, Brick-Lok, and
VELVET Masonry Cements

Saylor's Portland and
Saylor's PLUS Cements

Flamingo-BRIXMENT Colored
Cements for Masonry

MANUFACTURER:

Essroc Cement Corp.
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PRODUCT DESCRIPTION:

Saylor's Portland Cement is a specially formulated and manufactured hydraulic cement conforming to ASTM C 150, ASTM C 1157, and AASHTO M-85.

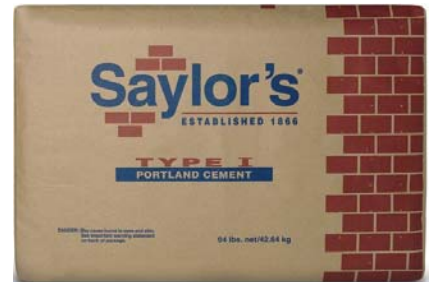
Essroc carefully selects and blends the raw materials and follows stringent quality control procedures in the manufacture of Saylor's Portland Cement. This results in a high quality, consistent Portland Cement that is easy to work with during construction and contributes to long lasting, aesthetically pleasing structures.

BENEFITS:

- More consistent plastic and hardened mortar properties
- Mixes well with hydrated lime
- Consistent color
- Better workability
- Several formulations to meet a variety of project requirements

APPLICATIONS:

Essroc Packaged Portland Cement is primarily designed for use in mortar to construct masonry walls with brick, stone, and concrete block. Essroc Packaged Portland Cement can also be used to prepare small batches of concrete.



TYPES AND USES:

Saylor's Portland Cement is available in the following types:

Type I: A general purpose Portland cement that is most commonly used because it delivers excellent results in a wide range of building applications.

Type II: Offers moderate resistance to sulfate attack and provides low heat generation.

Type III: Develops higher early strengths when used in concrete and mortar. It is especially useful when placing concrete in cold weather.

Type V: Similar to Type II, though Type V provides even greater resistance to sulfate attack and even lower heat generation.

Type IA, IIA, and IIIA: Air-entrained Portland Cements are similar to their corresponding types but with a small dose of air-entraining admixture inter-ground into the cement. These cements are beneficial when the addition of an air-entraining admixture is

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either not possible or desired. Air-entrained Portland Cements are typically used when additional workability is desired or to provide increased resistance against scaling when the concrete or mortar is exposed to freeze-thaw cycles in the presence of de-icing chemicals.

PACKAGING:

Saylor's Portland Cement is packaged in 94 lb.(50kg) multi-walled bags. Packages should be kept free from moisture.

AVAILABILITY:

Contact your Essroc Sales Representative for availability in your area.

APPLICABLE STANDARDS:

- ASTM C 150 Portland Cement
- AASHTO M-85 Portland Cement
- ASTM C 1157 Hydraulic Cement
- ASTM C 207 Hydrated Lime
- ASTM C 270 Masonry Mortar
- ASTM C 144 Aggregates for Masonry Mortar
- ASTM C 780 Preconstruction and Construction Evaluation for Masonry Mortar

PORPORTIONING and MIXING MORTAR FOR MASONRY APPLICATIONS:

See Table 1 for proper proportioning.

When mixing, use a paddle-type mortar mixer. Begin mixing by placing ¾ of the required amount of water, ½ the required amount of sand and all the Portland cement and the lime into the mixer.

Briefly mix the initial material until fully blended. Then add the remaining sand and water to the mixer.

Continue to mix for a minimum of 3 and a maximum of 5 minutes after the last mix water has been added. This provides greater assurance of homogeneity and adequate workability of the mortar.

Although minor retempering is allowed, mortar should be used or discarded after 90 minutes.

Table 1:

| Proportion Specifications for Mortar* | | | |
|---------------------------------------|--------------------------|---------------|---|
| Mortar Type | Saylor's Portland Cement | Hydrated lime | Aggregate (Sand) |
| N | 1 | 1/2 to 1-1/4 | Total aggregate should be not less than 2 ^{1/4} and not more than 3-1/2 the sum of the separate volumes of cementitious material |
| S | 1 | 1/4 to 1/2 | |
| M | 1 | 1/4 | |

*Adapted from ASTM C 270

WORKMANSHIP FOR MASONRY APPLICATIONS:

Set masonry units in mortar beds as quickly as possible after the mortar bed is placed. Avoid furrowing bed joints. Provide enough mortar to guarantee full head and bed joints. Don't attempt to move or adjust masonry units once the mortar has begun to stiffen. Mortar joints shall be tooled when the surface is thumb-print hard.

MIXING and FINISHING CONCRETE:

Use a drum mixer and follow ACI 304 recommendations for mixing and finishing and ACI 308 for curing concrete. For a mix proportion guideline see Table 2 below.

Table 2:

| Proportioning Concrete * | | |
|--|----------|--------------|
| Mix Strength with Nominal Curing (PSI) | 4000 | 3000 |
| 94 lb. Bags of Cement | 1 | 1 |
| 5 Gal. Buckets of 3/4" Stone | 4.5 | 5 |
| 5 Gal. Buckets of Concrete Sand | 3 | 3.5 |
| Max. Gallons of Water | 5 | 5.5 |
| Application | flatwork | w all/footer |
| Approx. Batch Size (cu. Feet) | 4.0 | 4.6 |

Always use the minimum water required to place the concrete.
* Adapted from PCA, Design and Control of Concrete Mixtures .
* Assuming using air-entrained portland cement or air-entrainment agent added to non-air entrained concrete.

WARRANTY:

Essroc warrants that its products are free from manufacturing defects and conform to applicable ASTM standards.

Essroc makes no warranty or guarantee, express or implied, including warranties of fitness for a particular purpose or merchantability, respecting its products. User assumes all risks and liability in connection with the suitability of the products for the intended use.

PRECAUTIONS:

Minimize direct contact with wet cement. Exposure of sufficient duration to wet Portland Cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns. Consult the relevant MSDS before working with Essroc Portland Cement.

FOR MORE INFORMATION:

For more information on Essroc's products or technical assistance visit us online at www.essroc.com or call at (800)437-7762.

