



# VOIDSPAN **PHLc** *Fill*

## PRODUCT DATA SHEET

### Description/ Uses

**VoidSpan PHLc FILL** is a breathable, ultra- low shrinkage, flowable, self-consolidating fill for use in consolidation grouting of wide cracks and cavities in less heavily loaded older masonry structures. Based on a pozzolanic hydraulic lime as per ASTM C1707, it is a low-to-moderate strength void filler and mortar replacement material. Uses Include:

- Gravity feeding and low pressure pump filling of voids and cracks as narrow as 1/8" in width.\

**Caution:** VOIDSPAN **PHLc FILL** is NOT recommended for use as a structural adhesive or grout where documented strength gain or exposed weather resistance is required.

### Fill Placement

**Preparation:** Flush out all loose and deleterious materials from cracks and cavities that are to receive grout. Immediately prior to injection, dampen contact surfaces but avoid leaving standing water.

**Mixing:** Combine each 50-pound bag with one gallon of potable water (this is equivalent to 5.5 parts PHLc to 1 part water by volume). Initially hand mix and then use a helical mixing paddle at 1,000 minimum rpm for several minutes until fully blended and becomes flowable. **DO NOT ADD ADDITIONAL WATER!**

**Working Time:** Up to 60-minutes with proper agitation. Do not re-temper after 60 minutes.

**Placement:** Grout shall be placed by gravity feeding or slow action/ slow velocity pumping.

**Lift Height:** Limit lift heights by the ability of the substrate and formwork to safely resist at least 1 psi fluid pressure per vertical foot of grout lift, plus injection pressure.

**Clean up:** **VoidSpan PHLc** is primarily a lime-based product and should be cleaned up in the similar manner to a lime and cement mortar.

### Bag Contents / Storage

Each 50-lb bag of **PHLc** powder yields about 0.5 cubic feet of grout when mixed with 1 gallon of water. Bags must be protected from puncture and stored in a dry place. Use product within 120-days of purchase.

### Chemical and Physical Grout Properties

Cement Content by weight of Binder: < 15% meeting ASTM C1707 as a "PHLc"

Chloride Content by weight of Binder: 0.002%

<b>Flowability:</b>	<b>135%</b> per ASTM C230
<b>Dimension Change after Hardening:</b>	<b>0.06%</b> per ASTM C1090
<b>Standard Curing Time (CT):</b>	<b>120-days</b> per ASTM C1713
<b>Water Vapor Transmission:</b>	<b>1.9 g water/ sq meter/ hour</b> per ASTM E96 (modified)
<b>Compressive Strength:</b>	<b>between 1,200 and 1,800 psi at 120 days</b>

## Cautions/ Limitations

- Do not inject into unclean, friable or excessively dry and/or absorbent cavities, or into cavities with standing water. Apply when masonry temperatures are between 40 degrees F and 90 degrees F prior to and for at least 7 days after placement. Do not allow the grout to freeze for at least 14 days after placement.
- Provide and maintain proper and adequate restraint of masonry to safely resist the fluid pressures of grout within the cavities. Provide for fluid pressures of at least 120 pounds per square foot per foot of fluid grout height, or injection pressures from pumping if greater.
- Because of the high flowability of the grout, unintended leakage may occur and should be avoided.
- Grout lifts should be limited to not more than 36-inches in height, with proper pressure restraint, and sequenced at intervals of not less than 20-hours. Pressure restraint must be sufficient to resist the fluid pressure of two lifts, the lower, which is stiffening (at > 20-hour maturity), and the upper which is fluid (freshly placed).
- **This product is highly alkaline and may contain small amounts of crystalline silica. Exercise care in using this product, along appropriate eye, skin and breathing protection. Consult Material Safety Data Sheet for additional information.**

## Installer Responsibility

It shall be the Installer’s sole responsibility to use good judgment and experience in installing this material and to conform to all Cautions and Limitations, and all requirements that are noted or referenced herein.