

# Harden X Plus™

## Lithium Hardener/Sealer/Densifier

**LEED® EQ Credit 4.1: Low-Emitting Materials:  
Adhesives & Sealants**

## TECHNICAL DATA SHEET

### PRODUCT DESCRIPTION

SealSource International manufactures this premiere hardener/sealer/densifier with the most advanced technology in the industry. This lithium silicate formulation of **Harden XPlus** contains a higher solid content resulting in a superior hardened surface. **Harden XPlus** provides increased concrete strength and performance. **Harden XPlus** is not a coating, it completely penetrates the pores of the surface reacting with the calcium hydroxide in the concrete to form stable, insoluble tri-calcium silica structures in just one application—with no cracking, peeling or flaking for the life of the surface. This unique design will give you greater hardening properties increasing the optimum performance of the surface.

**Harden XPlus** is sprayed evenly over the area to be treated--there is no need to flush the surface or remove and dispose of any excess material after installation. **Harden XPlus** gives long-term protection in a single application, dramatically reducing maintenance costs and facility downtime.

### USES

**Harden XPlus** is designed for interior or exterior use on new or existing concrete (as noted in ACI Standard 302.1R-89), Its many industrial and commercial applications include warehouses, manufacturing facilities, roadways, loading docks, sidewalks, parking facilities, vehicle showrooms, transportation terminals, distribution centers, sports & entertainment venues, and convention centers.

**Harden XPlus** is USDA approved for use in food & drug processing facilities and is safe for incidental contact with food.

### ADVANTAGES

- Lithium Technology – allows deeper penetration and a more complete chemical reaction for maximum sealing/hardening/densification
- Maximum Resistance to dusting & abrasion
- No Flushing - material is simply sprayed evenly over the surface with no flushing or removal of excess material
- Durable – one-time installation provides long-lasting protection
- Fast-Drying – dries in 10 minutes, open to traffic in 30 minutes

- Light-Reflective – provides immediate sheen that improves over time with normal wear and maintenance
- Lower Potential for Efflorescence than sodium-based treatments
- Stable In All Environmental Conditions - eliminates expansion/contraction caused by ASR in sodium silicates
- Low-Maintenance Surface – minimal downtime and maintenance costs
- USDA Approved - for incidental food contact
- Environmentally Safe - low VOCs (< 50 g/L), odorless
- ASR – Our unique lithium silicate formulation will help in mitigating the effects of ASR, as well as not causing ASR

## PHYSICAL PROPERTIES

Form:	Clear, water-based solution
Total solids:	15.4%
Active Ingredients:	100% of total solids
Specific Gravity:	1.11
pH Level:	11.0
Flash Point:	N/A
VOC Content:	< 50 grams/L, 0 lb/gal, or 0 g/L per gallon
Freeze Point:	32° F
Slip Resistance:	Does not change floor friction coefficient
Depth of Surface Penetration:	3-8 mm

## PACKAGING

- 55 Gallon Drums (drum containers filled by weight, volume is closely approximate)
- 5 Gallon Pails

## MIXING

**Harden XWP** is a single component product. Prior to use shake container or stir for one to two minutes.

## APPLICATION METHODS/COVERAGE RATES

The use of a Certified Applicator is required for all national accounts. Please see separate application instruction document for complete application information. **Harden XPlus** may be applied by HPLV, pump-up, airless, backpack, or mechanical sprayer; roller, or brush at these approximately 500-600 sq/ft per gallon (11-13 m<sup>2</sup>/liter). Rate will vary depending on surface porosity.

## DRYING TIME

Dries in 1-2 hours and is ready for traffic as soon as the surface is dry.

## SHELF LIFE

**Harden XPlus** may be stored for up to one year in unopened, factory-sealed container under normal storage conditions of 55° F - 95° F.

## COMPLIANCES

Recommended for use on concrete classes both new and existing surfaces as noted in ACI Standard 302.1R-89

## FRICITION TEST DATA

These series of tests were conducted according to ASTM C-1028-96 guidelines. All samples had a machine trowel finish.

### RESULTS

Dry untreated specimen	0.710
Wet untreated specimen	0.470
<b>Harden XPlus</b> treated specimen (wet)	0.460
<b>Harden XPlus</b> treated specimen (dry)	0.700

### INTERPRETATION

**Harden XPlus** products do not significantly alter the friction qualities of the surface they are applied to. All standard methods for accident prevention must be used in situations where traction is of concern.

## ABRASION TEST DATA

Test Method: Mohs Hardness testing was conducted in conjunction with ASTM C1353 on 3000 psi steel-troweled concrete that had been in place for 10 years. The absolute scale of hardness equivalent is given in parentheses following the Mohs number.

Untreated Concrete	3.5 (9)
Concrete Treated with <b>Harden XPlus</b>	7.4 (100)

The Mohs hardness scale simply consists of 10 minerals arranged in order from 1 to 10. Diamond is rated as the hardest and is indexed as 10; talc as the softest with index number 1.

## FLEXURAL STRENGTH TEST

Test Method: Per ASTM C-78-94 the standard method for flexural strength of concrete (using simple beam with third-point loading).

Untreated	420
Treated with <b>Harden XPlus</b>	655

## SAFETY

- Read Material Safety Data Sheet before using
- Keep out of the reach of children
- Protect from freezing
- Wear safety glasses and rubber gloves
- Do not apply to soft metals
- Do not apply to glass

## **WARRANTY**

SealSource® International, LLC will refund the price of or replace, at its sole election, product it finds to be defective provided the product has been used properly. Except as expressly stated above, the Company makes no warranty of merchantability and no warranty of fitness for any particular purpose, nor does it make any warranty, express or implied, of any nature whatsoever with respect to the product or its use. In no event shall the company be liable for delay caused by defects; loss of use; indirect, special or consequential damages; or for any charges or expenses of any nature incurred without its written consent.