



Product Data Sheet

SealSource International:

SS Harden X si

Nano Lithium Concrete Densifier

EQ Credit 4:: Low – emitting VOC Compliant Materials

Product Description-

SealSource International, LLC manufactures the latest technology in the hardener/densifier market with the SS Harden X si. The SS Harden X si is a clear, odorless V.O.C. compliant, water-based, environmentally safe-to-use salt protectant and dust proofer that hardens, seals, and densifies concrete and masonry surfaces. This Nano Lithium Silicate formulation reacts with the calcium hydroxide in the concrete to form stable tri-calcium silica structures and chloride screen that is insoluble, providing greater density and resistance to abrasion, dusting, and attack. It is a sustainable product and does not require the excess material to be removed from the surface and then disposed of. You simply spray the SS Harden X si evenly on the surface to be treated and walk away. The SS Harden X si superior densification process will reduce surface porosity, creating a healthier, cleaner climate, which will also greatly reduce maintenance costs and increase light reflectivity providing a brighter environment for your employees and customers.

Uses-

Harden X si can be used on new or existing, interior or exterior concrete and forms a protective layer that is breathable, dense and abrasion resistant.

Physical Properties-

Form Clear, light amber, water-based solution

Shelf Life 1 year in factory sealed container

Total Solids 17%

Active Ingredients 100% of total solids

Specific Gravity 1.10

pH 11.0

Flash Point N/A

VOC Content 50<gms/L 0 lbs/gal or 0 g/L per gallon

Freeze Point 32° F (0°)

Slip Resistance does not change floor friction coefficient

Depth of Surface Penetration 2-8 mm

Advantages-

- Densifies – Closes the pores in concrete making it more resistant to water and chemical attack.
- Durable – A single application is all that's needed.
- Hardens – Unique lithium formulation that allows deeper penetration and a more complete chemical reaction allowing greater hardening properties.
- Dustproofs – Provides a cleaner and safer environment for the life of the floor.
- Salt Protection - Meets industry standard for protection against salt intrusion.

Packaging-

- 55 Gallon Drums-Drum containers filled by weight, volume is closely approximate.
- 5 Gallon Pails

Mixing-

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

Safety-

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

Application Recommendations-

SS Harden X si should be applied by low pressure sprayer, airless sprayer, roller or brush. Apply at 400-500 sq. ft. per gallon. Coverage rate will vary depending on surface porosity.

* Certified Applicator is required for all national accounts

Preparation and Installation-

Concrete must be clean, structurally sound and free of wax, dirt, coatings and paint, curing compounds, and petrochemicals. Random cracks, damaged control joints, and new construction joints should be properly prepared. Concrete laitance should be removed. Air-blast or vacuum concrete dust prior to installing Harden X si. Hard steel troweled surfaces should be water tested for penetration characteristics. Horizontal and vertical concrete or masonry surfaces should be sand blasted or shot blasted prior to application for maximum penetration. Shelf Life- One year, in original, unopened factory containers, under normal storage conditions of 55°F to 95°F.

Warranty-

SealSource International will refund the price of or replace, at its 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, expressed 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, for loss of use, for indirect, special or consequential damages, or for any charges or expenses of any nature incurred without its written consent.

Technical Services, Sales and Customer Support (800) 305-9144

Chemical Resistance Chart

SS Harden x™ S1

{ NO EFFECT = NE MODERATE EFFECT = M SEVERE EFFECT = S }

ALCOHOLS & SOLVENTS

Benzyl Alcohol	NE
Carbon Tetrachloride	NE
Ethyl Alcohol	NE
Isopropyl Alcohol	NE
Glycerol	NE
Methyl Alcohol	NE
Ethylene Glycol	NE
Glycerol 1-Hexanol	NE
Resorcinol	NE
T-Butyl Alcohol	NE
Trichloroethylene	NE

ALDEHYDES

Benzaldehyde	NE
Butraldehyde	NE
Furfural	NE

AMINES

Aniline	NE
Triethanolamine...	NE

CLEANING SOLUTIONS

Calgonite	NE
Chlorox...	NE
Chlorox Concentrate	NE
Joy	NE
Joy Concentrate	NE
Lestoil	NE
Lux Flakes	NE
Rinse Dry	NE
Rinse Dry Concentrate	NE
Tide Concentrate	NE

ESTERS

Amyl Acetate	NE
Dibutyl Sebacate	NE
Dioctyl Phthalate	NE
Ethyl Acetate	NE
Tricresyl Phosphate	NE

ETHERS

Dibenzyl Ether	NE
Diethylene Glycol Monobutyl Ether	NE
Ethyl Ether	NE

FATS AND OILS

Butter	M
Castor Oil	M
Cottonseed Oil	M
Lard	M
Light oil above 35 Baume	M
Oleomargarine	M
Olive Oil	M
White Mineral Oil	M

HALOGENATED HYDROCARBONS

Benzyl Chloride...	NE
Bromobenzene	NE
Carbon Tetrachloride	NE
Chloroform	NE
Ethylene Dichloride...	NE
Ethylene Glycol Monoethyl Ether	NE
Perchloroethylene	NE

HYDROCARBONS

Benzene	NE
Carbon Disulphide	NE
Cyclohexane	NE
Ethylbenzene	NE
Heptane	NE
Hexane	NE
Naphthalene	NE
Nitrobenzene	NE
Toluene	NE
Xylene	NE

HYDRAULIC FLUIDS

Brake Fluid	M
Oronite 8200	M
Pydraul F9	M
Pydraul 60	M
Skydrol	M
Skydrol 500	M
Transmission Fluid	M

INORGANIC ACIDS

Chlorosulphonic Acid	S
Chromic Acid	M
Chromic Acid	M
Hydrochloric Acid	M
Hydrochloric Acid Concentrate	M
Hydrofluoric Acid	S
Hydrofluoric Acid Concentrate	S
Nitric Acid	S
Phosphoric Acid Concentrate	S
Sulphuric Acid	M

INORGANIC BASES

Barium Hydroxide Concentrate	NE
Calcium Hydroxide Concentrate	NE
Potassium Hydroxide	M
Sodium Hydroxide	M

KETONES

Acetone	NE
Methyl Ethyl Ketone	NE
Methyl Isobutyl Ketone	NE

MISCELLANEOUS

Antifreeze	M
Cold Ashes	NE
Buttermilk	NE
Chlorine Gas	NE
Gelatin	NE
Glucose	NE
Molasses	M
Nickel Plating Solutions	S
Ores	NE
Cider	NE
Coal	NE
Corn Syrup	NE
Fermenting Fruits or Vegetables	M
Formaldehyde	NE
Hydrogen Sulfide	M
Manure	NE
Sauerkraut	M
Sugar	NE
Sulfite Liquor	NE
Sulfur Dioxide	NE
Tanning Bark	M
Tanning Liquor	M

OILS AND FUELS

A.S.T.M. No. 1 Oil	M
A.S.T.M. No. 2 Oil	M
A.S.T.M. No. 3 Oil	M
A.S.T.M. Fuel A	M
A.S.T.M. Fuel B	M
A.S.T.M. Fuel C	M
Heating Fuel Oil	M
Jet AirCraft Engine Oil	M
Lignite Oils	M

ORGANIC ACIDS

Acetic Acid	S
Acetic Acid – Glacial	M
Acid Waters pH/6.5 Boric Acid	NE
Carbolic Acid Carbonic Acid	M
Chromic Acid	M
Citric Acid Formic Acid	M
Humic Acid	M
Hydrochloric Acid	S
Lactic Acid	M
Oleic Acid	NE
Oxalic Acid	M
Phenol Acid	M
Phosphoric 10%	M
Phosphoric 85%...	M
Wine	M

SALTS

Ammonium Chloride	NE
Ammonium Nitrate	NE
Barium Chloride	NE
Calcium Chloride	NE
Calcium Hypochlorite	M
Cupric Chloride	NE
Cupric Sulphate	NE
Ferric Chloride	NE
Ferric Nitrate	NE
Ferrous Sulphate	NE
Iodine	M
Magnesium Chloride	NE
Magnesium Sulphate	NE
Nickel Sulphate	NE
Potassium Chloride	NE
Potassium Permanganate	NE
Potassium Dichromate	M
Sodium Borax	NE
Sodium Bicarbonate	NE
Sodium Chloride	NE
Zinc Nitrate	NE

WATER

Distilled Water	NE
Mine Water,Waste	NE
Sea Water	NE
Soft Water/75 ppm Carbonate	NE

The above mentioned chemicals were tested based on the following parameters: attack to the concrete by means of staining and/or erosion. Therefore, the measure of the overall effect determines the level of concern based on those indicators. However, the overall attack can be altered due to the various conditions, which are, but not limited to, design of the concrete, ambient temperature, including the humidity levels, contact time of the chemical itself as well as the concentration of such chemical. The information contained in this chemical resistance chart is based on reliable data, but all such recommendations are specified without guarantee or warranty. SealSource, LC strongly recommends discussing specific concerns with their technical department prior to application.