



L&M

Construction Chemicals

LION HARD™

DS-174.7-0417

A product brand of LATICRETE International, Inc.



1. PRODUCT NAME

LION HARD™

2. MANUFACTURER

LATICRETE International, Inc.

1 LATICRETE Park North

Bethany, CT 06524-3423 USA

Telephone: +1.203.393.0010, ext. 235

Toll Free: 1.800.243.4788, ext. 235

Fax: +1.203.393.1684

Website: www.lmcc.com

3. PRODUCT DESCRIPTION

LION HARD is a low VOC, environmentally friendly lithium silicate concrete floor densifier, hardener, and sealer. This product penetrates bare concrete surfaces and transforms them into permanently dust free floors that get better with age. There's no scrubbing or washing necessary. This product may be applied to new and existing cured concrete. LION HARD is also very effective on polished concrete surfaces to harden, densify and protect their attractive and durable finish.

Uses

LION HARD provides long lasting dustproof performance on high traffic concrete floors in any situation ranging from heavy industrial settings such as textile mills, warehouses, bus terminals and factories, to small residential and commercial settings.

Advantages

- Meets NFSI safe floor requirements
- Resistant to surface whitening
- Densifies and dustproofs bare concrete floors
- Reacts instantly upon contact with floor surface
- Produces surface gloss which improves with age when polished
- Will not absorb water or contribute to floor sweating
- Effective on both new and old floors
- UV stable. Will not yellow, flake or discolor

- Low VOC, Non-Flammable, Odorless
- Easy to maintain, no waxing necessary

Suitable Substrates

- Existing Concrete
- New Concrete

Packaging

5 Gal (18.9 L)

55 Gal (208 L)

Approximate Coverage

Typical Application Rates: Coverage dependent upon surface texture and porosity. Typical rate is 600-800 ft²/gal (14.7-19.6 m²) on hard troweled, dense concrete. One coat normally recommended. For best results on porous concrete surfaces, apply second coat after the first coat has dried completely and any dried residue has been removed.

Polished concrete: Apply two coats, the first at 400-600 ft²/gal (9.8-14.7 m²/L) and the second at 600-800 ft²/gal (14.7-19.5 m²/L) for maximum hardness and surface durability, per instructions.

Shelf Life

LION HARD containers are to be sealed and stored in a clean, dry place above 40°F (4°C). Shelf life is two years in unopened containers when properly stored. Do not allow to freeze.

Limitations

- Apply when concrete temperatures are 40°F (4°C) and rising.
- Do not use acidic or highly alkaline cleaners on treated surfaces.
- All spills must be cleaned up in a timely manner.
- LION HARD is not a curing compound. Use on concrete that is less than 3 days will reduce its long term effectiveness.

Cautions

- Consult SDS for more safety information
- Protect finished work from traffic until fully cured
- Do not allow to freeze
- Keep out of reach of children

Mock-ups and field test areas are required in order to validate performance and appearance related characteristics (including but not limited to color, inherent surface variations, wear, anti-dusting, abrasion resistance, chemical resistance, stain resistance, coefficient of friction, etc.) to ensure system performance as specified for the intended use, and to determine approval of the decorative flooring system.

4. TECHNICAL DATA

Applicable Standard and Test Methods

ASTM E303
ASTM C779

Physical Properties

Property	Observed
Type Solids	Lithium Silicate
Active Solids	100%
Viscosity	Water like
pH	10.9
Specific Gravity	1.10
Color	Clear
Weathering UV Test	Excellent
Surface Breathable	Yes
Skid Resistance ASTM E 303	Good
Abrasion Resistance ASTM C 779	+200 – 400%

Working Properties

Specifications are subject to change without notification. Technical data shown in product data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary due to critical job site factors. All recommendations, statements and technical data contained in this data sheet are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind. Satisfactory results depend upon many factors beyond the control of LATICRETE International, Inc. User shall rely on their own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from their direct use, indirect use or consequential to their use of the product. LATICRETE shall not be liable to the buyer or any third party for any injury, loss or damage directly or indirectly resulting from use or inability to use the product.

5. INSTALLATION

Surface Preparation: On new, interior concrete, we recommend finishing the concrete to a hard steel trowel finish (3 pass) per ACI-302.1R, Class 5 floor.

Existing, Cured Concrete: Remove unsound concrete and fill holes, cracks and deteriorated areas. All residue, oil, sealers, waxes, contaminants and laitance must be removed from surfaces to assure maximum penetration.

Application: Apply one, saturating coat of LION HARD™ in a uniform manner, at a rate of 600 ft²/gal (14.7 m²/L). Install with a low pressure sprayer or other device, maintaining a wet surface sheen for 15 to 20 minutes. Apply more LION HARD to areas that are more porous and appear to readily absorb the material. Redistribute any excess LION HARD with soft broom or microfiber pad, allowing material to dry uniformly. Avoid brooming once drying begins. After drying remove any excess, powder-like residue with a stiff broom or dry buffer.

New Concrete: For best results, moist cure fresh concrete or apply clear, non-residual Cure. Allow new concrete to cure for a minimum of 72 hours; seven days are recommended for best results. After the curing period has elapsed, treat new concrete surfaces as described above in application.

Under certain conditions application to fresh concrete may be necessary. In this case apply a uniform coat after final troweling and when surface water glaze is gone, but before application of a dissipating curing compound. Apply LION HARD at the rate of 600 ft²/gal (14.7 m²/L) with a low pressure sprayer, maintaining a wet surface sheen for 15-20 minutes. Remove any puddles or excess accumulation with soft broom or microfiber pad, allowing material to dry uniformly. After treatment has dried apply specified dissipating resin curing compound per industry standards.

Diamond Polished Concrete: After a sequence of polishing steps has been determined, proceed with coarse grinding steps. After the 400 diamond grit step has been reached and completed, apply one uniform, saturating coat of LION HARD at 400-600 ft²/gal. (9.8-14.7 m²/L), keeping the surface wet for 15 to 20 minutes. Do not puddle. When dry, proceed with additional required polishing steps. After the 800 grit level and before the final polishing step, uniformly apply second coat of LION HARD at 600-800 ft²/gal. (14.7-19.5 m²/L). Allow to dry and remove any residue with polishing diamonds. No water flush is required.

6. AVAILABILITY AND COST

Availability

L&M™ and LATICRETE® materials are available worldwide.

For Distributor Information, Call:

Toll Free: 1.800.243.4788
Telephone: +1.203.393.0010

For on-line distributor information, visit LATICRETE at www.lmcc.com

Cost

Contact a LATICRETE Distributor in your area.

7. SHORT SPEC

033000, 033543, 096000: Concrete densifier, sealer, hardener. All exposed concrete surfaces to be treated.

“L&M LION HARD” by LATICRETE International, Inc. See complete guide spec at www.laticrete.com

8. WARRANTY

See 10. FILING SYSTEM:

DS 230.13: LATICRETE Product Warranty

9. MAINTENANCE

The long term performance, appearance, and life expectancy of wear surface products are critically dependent upon a good routine maintenance program designed specifically for the installed wear surface type, traffic, and other conditions. Properly placed walk-off mats, inside and outside will help increase the life of the floor. Some cleaning products and equipment or improper use of products can damage a wear surface appearance over time. Recommended maintenance program consists of frequent and thorough cleanings utilizing FGS CONCRETE CONDITIONER™. Frequency of washing will vary, as it may be necessary daily, weekly or less frequently depending on floor usage and age. A mechanical walk-behind or ride-on scrubber is an efficient and economical means of regularly cleaning concrete floors. Only soft scrubbing or soft brush attachments should be used when mechanically scrubbing your floor. Do not use aggressive abrasive pads or brushes. The use of black scrubbing pads, diamond impregnated pads or carbide impregnated type brushes may dull the surface gloss. Wet mops work well on small floors or places where a mechanical scrubber will not fit.

10. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the LATICRETE Technical Service Hotline:

Toll Free: 1.800.243.4788, ext. 235
Telephone: +1.203.393.0010, ext. 235
Fax: +1.203.393.1948

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at www.laticrete.com.

10. FILING SYSTEM

Additional product information is available on our website at www.laticrete.com. The following is a list of related documents:

- DS 230.13: LATICRETE® Product Warranty
- DS 172.0: L&M CURE™