

# Durex® Dur-A-Seal LS 21

## Concrete Densifier and Chemical Hardener

- Description** Durex® Dur-A-Seal LS-21 Concrete Refractory & Chemical Hardener compound is a ready-to-use, colourless liquid, formulated with chemically reactive raw materials to harden and dustproof concrete. Durex® Dur-A-Seal LS-21 offers substantial improvement in abrasion and hardness, and will significantly improve the durability of the concrete surface when compared to untreated concrete. When applied, it penetrates into the concrete surface and a chemical reaction takes place, producing a by-product that fills in the pores of the concrete. This process produces a substantially denser concrete surface with enhanced durability. In addition to this action, Durex® Dur-A-Seal LS-21 also solidifies concrete, eliminating dusting and pitting as well as preventing efflorescence.
- Uses** Durex® Dur-A-Seal LS-21 Concrete Densifier & Chemical Hardener is recommended for use wherever hardened, dustproofed and improved adhesion, abrasion-resistant surfaces are required. Durex® Dur-A-Seal LS-21 is very suitable for concrete polishing. It may also be used to harden old masonry walls to be coated by paints or cement-based aggregates.
- Ideal For**
- . Industrial, institutional, commercial and residential concrete slab applications
  - . Warehouses and storage silos
  - . Sewage plants and chemical processing facilities
  - . Refineries
  - . Civic centres, sports arenas and stadiums
  - . Hospitals
  - . Airports
- Features**
- . Formulated using Lithium Silicates, which outperforms Potassium and Sodium Silicates
  - . Superior efflorescence resistance than standard Silicates
  - . Zero VOCs
  - . Penetrates deeply into concrete to increase density and harden surfaces to help prevent entry of moisture and other foreign matter
  - . Dustproof and improves chemical, petroleum and abrasion resistance of treated surfaces
  - . Provides a permanent, attractive sheen with the ability to polish
  - . Protects against scratching or peeling
  - . Provides tough, protected surface that will not yellow, discolour or show pedestrian or vehicular traffic wear marks
  - . Improves light reflectance
  - . Ready to use and easy to apply

### TECHNICAL DATA

PHYSICAL PROPERTIES	
Colour	Translucent liquid
Resin Type	Lithium Silicate
Coverage	New concrete: 7.36 m <sup>2</sup> /L (300 ft <sup>2</sup> /gal) Old concrete: 4.91 m <sup>2</sup> /L (200 ft <sup>2</sup> /gal)
Cure Time @ 23°C (75°F), 55% RH	To touch: 2-4 hours Foot traffic: 4 hours Full cure: 12 hours  *Note: This product dries very quickly on new, freshly poured concrete. Drying times may be extended on existing concrete due to surface conditions.
pH Level	8.5-10
Reducer/Clean-up	Water

PERFORMANCE PROPERTIES	TEST METHOD	RESULTS
Percent Solids	ASTM D7232-06	21% (vol.)
Viscosity (Brookfield) 23°C (75°F)	ASTM D2196	300-1,000 cps
V.O.C.	ASTM D3960-05	0 g/L
Specific Gravity	ASTM D333	1.5 g/L
Abrasion Resistance	ASTM D4000	1000 g load, 1700 cycles, C-S Wheel 35 mg loss

<b>Packaging</b>	Durex® Dur-A-Seal LS-21 Concrete Densifier & Chemical Hardener is packaged in 190 L (45 gal) drums, 18.9 L (5 gal) and 3.78 L (1 gal) pails.
<b>Storage Conditions</b>	Store Durex® Dur-A-Seal LS-21 Concrete Densifier & Chemical Hardener in a dry, vented, waterproof location, stacked off the ground, out of direct sunlight and other detrimental conditions. Store liquid materials in ambient temperatures above 5 degrees C and below 35 degrees C. <b>KEEP FROM FREEZING.</b>
<b>Surface Preparation</b>	<p><b>New Concrete:</b> Chemical Hardener can be applied after final troweling.</p> <p><b>Sealed Concrete:</b> Surface should be clean and structurally sound. Remove all residues, curing compounds, oils, sealers, contaminants and laitance before applying Durex® Dur-A-Seal LS-21 Concrete Densifier &amp; Chemical Hardener. Fill and repair all holes, cracks and deteriorated areas that have been removed to sound concrete.</p> <p><b>Note:</b> The surface must be completely cleaned, rinsed and dried; otherwise, the sealer may not bond properly to the surface. Do not use high pressure greater than 1,000 psi when using a power washer.</p>
<b>Mixing Instructions</b>	Durex® Dur-A-Seal LS-21 Concrete Densifier & Chemical Hardener is sold ready to use. For optimum performance, gentle mixing or agitation is recommended.
<b>Application</b>	<p><b>Fresh Concrete:</b> Apply undiluted Durex® Dur-A-Seal LS-21 Concrete Densifier &amp; Chemical Hardener at approximately 4.91 m<sup>2</sup>/L (300 ft<sup>2</sup>/gal) using a low-pressure sprayer or by spreading evenly with a soft-bristled broom. Do not allow material to puddle on the surface. No further application steps are required for fresh concrete.</p> <p><b>Existing Concrete:</b> Saturate the surface with undiluted Durex® Dur-A-Seal LS-21 Concrete Densifier &amp; Chemical Hardener by sprayer, squeegee or broom. Keep the surface wet with Durex® Dur-A-Seal LS-21 Concrete Densifier &amp; Chemical Hardener for a minimum of 30 minutes (a range of 30 to 60 minutes may be required depending on temperature and conditions).</p> <p><b>Note:</b> Particular attention should be paid to porous and/or dry areas. These areas must be kept wet at all times with Durex® Dur-A-Seal LS-21. Once the surface begins to gel and becomes slippery, immediately spray the surface with a light water mist. Scrub the surface with a broom or mechanical scrubber to increase the penetration of Durex® Dur-A-Seal LS-21. Continue to work the product into the surface for another 5 to 10 minutes or until it becomes gelled and slippery for a second time. At this time, thoroughly flush the surface with water. During the flushing process, agitate the surface with a broom to aid in removal of excess product. Remove all excess material with a mop or squeegee. Thoroughly squeegee the surface dry. If there are any slippery patches, this is an indication that there is still excess product present. These areas should be re-flushed and re-applied until the entire surface is dry (extremely porous surfaces may require a second application).</p> <p><b>WARNING:</b> Failure to thoroughly wash and remove all excess material from floor surfaces may result in unsightly white stains. Immediately wash off over-spray from glass, aluminum or highly polished surfaces with water to avoid etching of surfaces. Durex® Dur-A-Seal LS-21 Concrete Densifier &amp; Chemical Hardener can be burnished to a high sheen on steel trowel concrete floors. A high-speed burnisher (2,000-2,200 rpm) with appropriate maintenance pad is needed.</p>
<b>Clean-Up</b>	Wash all tools and equipment immediately after use with mineral spirits.
<b>Limitations</b>	Do not use Durex® Dur-A-Seal LS-21 Concrete Densifier & Chemical Hardener if the temperature of the concrete is less than 2 degrees C (35 degrees F) or above 50 degrees C (135 degrees F).
<b>Health and Safety</b>	Use under well-ventilated conditions with appropriate respirator approved for organic vapours and rubber gloves when handling the product. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water and seek medical attention if irritation occurs. Harmful if swallowed. Do not induce vomiting. Drink 1-2 glasses of water or milk. Keep product out of reach of children. Read published Material Safety Data Sheet for additional information.
<b>Warranty</b>	Durabond warrants this product is free of manufacturing defects, and will replace at no charge, provided it has been applied within 12 months of purchase, it has been installed for uses suitable for this product and in accordance with the manufacturer's instructions.
<b>Technical Services</b>	Technical support is available upon request at <a href="mailto:info@durabond.com">info@durabond.com</a> . For the latest version of this data sheet, please visit our website at <a href="http://www.durabond.com">www.durabond.com</a> , call toll free at 1-877-DURABOND (387-2266) or speak with your Durabond Technical Coatings Ltd sales representative.

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