



Lithurin[®] Formula

VOLVO

Lithurin[®] Formula

is a well preserved composition with its origins from the early 1900s and has over the years been refined into today's products. The technique is simply described as a chemical reaction with minerals and substances in the concrete and the product. The benefit is that as soon as the chemical reaction is finished, the result is a homogeneous structure in the concrete, with no risk of descaling and flaking.



Abrasion

The biggest problem for a floor is mechanical abrasion through walking, vehicle and work lift traffic. Independent test results prove that Lithurin[®] treatment increases abrasion resistance by approx 20 times according to SP (Swedish National Testing and Research Institute). In abrasion a C 25/32 concrete is to be compared with a C50/60 concrete, when treated with Lithurin®. Lithurin® replaces so called dry shake hardeners with less risk, less manpower at a lower cost.

Green aspect





Lithurin® is water based and environment friendly. Lithurin® gives no smell or taste and is therefore also approved to be used in food industry proven by independent test institute SIK (Swedish Institute for Food Research).

History

Lithurin® has been used on concrete floors for 40 years on more than 30 000 000 m² in 35 countries.

Among our customers are companies such as Volvo, SAAB, Coca Cola and Akzo Nobel.

Efficiency

Aston University

Independent test results prove that when using Lithurin[®] as "moisture curing" the efficiency is as high as 79%, (75% is demanded).

Where to use Lithurin[®] treatment?

- Warehouses, production and distribution centres
- Shops, depots and shopping centres
- Garages and car parks
- · Airfields, concrete roads, hangars and harbour areas
- Airports, train stations and bus terminals
- Storage facilities and basements etc.





ab lindec



LITHURIN® HARD, DENS & SEAL ARE COMBINED ON THE BASIS OF ECONOMY AND REQUIREMENT

Indoor treatment

1 x Lithurin[®] Hard

1 x Lithurin[®] Seal

Area of application: when a hard and durable surface is required on a machine-finished concrete floor. A correctly executed treatment produces an abrasion value equivalent to hard concrete.

1 x Lithurin[®] Hard

1 x Lithurin[®] Dens

Area of application: when a hard and durable surface is required on a machine-finished concrete floor that is going to be sprinkled with water, e.g. washing facilities or surfaces that are cleaned with highpressure washing.

1 x Lithurin[®] Dens

Area of application: when the aim is to control dust on self leveling mortar. A correctly executed treatment provides a dust-free, easy to clean and glossy surface, which reduces friction and thereby increased durability.

1 x Lithurin[®] Seal

Area of application: when the aim is to control dust on machine-finished concrete floor. A correctly executed treatment provides a dust-free, easy to clean and glossy surface. Lithurin[®] Seal reduces. friction and thereby increases durability.

1 x Lithurin[®] Seal

Can be used as a combined moisture curer and dust binder. Applied directly on a ready trowelled.

Diamond ground concrete

1 x Lithurin[®] Hard

Area of application: to obtain a harder surface. With a harder surface, the gloss appears earlier compared with an untreated surface (increases the permanence of the gloss and is cost-effective).

1 x Lithurin® Dens

Area of application: to obtain a sealed surface before polishing a concrete surface. Lithurin[®] Dens seals the pores in the concrete surface and produces a deep gloss.

Outdoor treatment

2 x Lithurin® Hard

Area of application: to obtain a hard and durable surface outdoors, where the concrete surface has a finer surface structure and where the aim is to retain the surface structure as anti-slip protection.

2 x Lithurin[®] Hard 1 x Lithurin[®] Dens

Area of application: when a hard and durable surface is required outdoors, where the concrete surface has courser surface structures.





LITHURIN[®] HARD CONCRETE HARDENER







Lithurin® Hard

Lithurin[®] Hard is a deeply penetrating fluid hardener that reacts and strengthens the structure of concrete surfaces. Lithurin[®] Hard is an impregnator and does not form a surface film.

Lithurin[®] Hard is water-based and does not change the concrete's colour. The concrete becomes more resistant to abrasion and surface load. A one-off application provides long-term protection. Lithurin[®] Hard is approved for use on concrete floors in the food industry.

Area of application

1 x Lithurin[®] Hard as a concrete hardener before Lithurin[®] Seal, to increase abrasion resistance/durability.

2 x Lithurin[®] Hard as a hardener for concrete surfaces outdoors.

1 x Lithurin[®] Hard as a hardener in diamond grinding. Applied after coarse grinding, and produces a harder concrete surface. With a harder surface the surface gloss appears earlier compared with an untreated surface (cost-effective).

Environmental benefits Lithurin® Hard

- Max. VOC less than 10 g/l
- Water-based
- Odourless
- Eliminates dust from concrete, which produces better air quality

Benefits Lithurin® Hard

- Maximum abrasive resistance
- No flush cleaning
- Durable a one-off application provides long-term protection against abrasion
- Fast drying time dry after 30 minutes, at a temp. of +15-18°
- Can be used on new or existing concrete, indoors and outdoors

Equipment needed

- Soft brush or mop
- Watering can

Requirements for treatment with Lithurin® Hard

- The concrete must be at least 7 days old at a temp. of +14-18 °C and a minimum of
- 14 days at a temp. of +10-13 °C before application
- Min. temp. of +5 °C on the surface of the concrete (equivalent to an air temp. of +10 °C)
- The curfe
- The surface must be free of contaminants
- When treating old floors the surface must be grinded clean before application
- Lithurin[®] Hard must dry before Lithurin[®] Dens/Seal is applied





LAYING INSTRUCTIONS LITHURIN® HARD

Instructions for Lithurin[®] Hard, indoors with brush

Contaminated areas should be ground clean.

- 1. Apply Lithurin[®] Hard with a soft brush.
- 2. Work the material into the surface with the soft brush to ensure good absorption.
- 3. Distribute plentiful Lithurin[®] Hard over the surface until there are no puddles. Brush away any footprints.
- 4. Allow to dry.
- 5. Lithurin® Hard must dry before Lithurin® Dens/Seal is applied.





Instructions for Lithurin[®] Hard, indoors with combi scouring machine

1. Pour Lithurin[®] Hard into the tank. Fix black nylon scouring pads onto the machine. First apply the surface with laying and scrubbing activated and the suction function turned off.

2. Pour water into the tank and run over the surface before it is dry with laying and scrubbing activated and the suction function turned on. (If extremely dry surface, pre-water the surface). 3. If the surface starts to dry before laying is completed, stop laying and repeat steps 1 and 2.

4. If the surface has already dried, repeat from step 1.

5. Lithurin® Hard must dry before Lithurin® Dens/Seal is applied.

The benefit of this application method is that the surface is cleaned at the same time as the concrete hardens. Calcium deposits are reduced and less moisture is brought to the surface. (Recommended for aesthetic floors).

Consumption

- Machine trowelled surface: approx. 0.15 litres/m²
- Non-machine trowelled surface: approx. 0.2-0.4 litres/m²













Instructions for Lithurin[®] Hard, outdoors with brush

Distribute Lithurin[®] Hard as evenly as possible over the surface with a watering can with a spray nozzle and a fine brush.
 Directly after the material has entered into the surface (before the surface has dried), rinse off the surface with a high pressure/powerful water jet.

3. When the surface is dry, repeat steps 1 and 2. On courser surface structures, use Lithurin[®] Dens on day 2.

Consumption

Machine trowelled surface: 2 treatments:approx. 0.30 litres/m²
Non-machine trowelled surface: 2-4 treatments: approx. 0.4-0.8 litres/m²

ab lindec[®] endeavours to provide correct information about technical properties and handling of its products. However, while ab lindec[®] has no control over the way in which the products are mixed and laid, or the conditions under which they set, ab lindec[®] can in no way be held responsible. ab lindec[®] is only responsible for the quality of the products at the time of delivery.



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LITHURIN[®] DENS CONCRETE DENSIFIER







Lithurin® Dens

Lithurin[®] Dens is an impregnator that makes the concrete surface denser. Lithurin[®] Dens is water-based and does not change the concrete's colour, penetrates deeper and reacts evenly in the concrete, which increases resistance to abrasion. The surface becomes a part of the structure with no cracking, flaking or scaling. A one-off application provides long-term protection. Lithurin is approved for use on concrete floors within the food industry and is partially water-repellent, anti-slip and makes cleaning easier.

Area of application

1 x Lithurin[®] Dens: as a concrete densifier when diamond grinding. To be applied before polishing. Increases the gloss and depth of the polishing. 1 x Lithurin[®] Dens: as a sealer for self leveling mortar.

1 x Lithurin[®] Dens: as a concrete densifier after Lithurin[®] Hard, on course surfaces outdoors for increased durability/abrasion resistance.

1 x Lithurin[®] Dens: instead of Lithurin[®] Seal on surfaces indoors that are going to be sprinkled with water, e.g. washing facilities or surfaces that will be cleaned with high-pressure washing.

Environmental benefits Lithurin® Dens

- Max. VOC less than 10 g/l
- Water-based
- Odourless
- Eliminates dusting from concrete, which produces better air quality

Benefits Lithurin® Dens

- Maximum durability
- Neutralises calcium deposits
- No flush cleaning (indoors)
- Durable a one-off application provides long-term protection
- Fast drying time dry after 30 minutes, at a temp. of +15-18°
- Can be used on new or existing concrete.

Equipment needed

- Soft brush or mop
- · Low-pressure sprayer, mechanical sprayer or watering can with spray-nozzle

Requirements for treatment with Lithurin® Dens

- Min. temp. of +5 °C on the concrete surface (equivalent to an air temp. of +10 °C)
- The surface must be free of contaminants
- In treatment of old floors, the surface must be grinded clean before application
- Lithurin[®] Dens must dry before any Lithurin[®] Seal is applied





LAYING INSTRUCTIONS LITHURIN® DENS

Instructions for Lithurin® Dens

1. Apply with a low pressure sprayer or can with spray-nozzle. 2. Work the material into the surface with a soft brush to ensure good absorption. Keep the surface damp (at a temp. of $+15-18^{\circ}$ C) for approx. 15-20 minutes.

3. The entire surface must be wet for 15-20 minutes, so that the material has time to react and penetrate the concrete surface. 4. If the surface starts to dry, wet it with more Lithurin[®] Dens. Ensure that no part of the surface dries during the absorption period.

5. Remove excess material with the brush, while it is still fluid. (Apply with pressure on the brush to remove excess material).6. Be sure to remove all excess material that the floor doesn't absorb.

7. The simplest method is to use steps 1 to 6, in stages of 100 m^2 per time per person (2 persons = 200 m^2).

8. To ensure that the concrete surface receives the right amount of material, the instructions above must be followed. 9. Under certain conditions, e.g. low temperature, strong wind etc., the absorption time is longer and at higher temperatures the absorption time is shorter.

Instructions for Lithurin® Dens, outdoors

 Distribute Lithurin[®] Dens as evenly as possible over the surface with a water can with a spray nozzle and a fine brush.
 Directly after the material has entered into the surface (before the surface has dried), rinse off the surface with a high pressure/powerfull water jet.

Consumption

- Machine trowelled surface: approx. 0.15 litres/m²
- Non-machine trowelled surface: approx. 0.2-0.4 litres/m²

















LITHURIN[®] SEAL CONCRETE SEALER



Lithurin[®] Seal

Lithurin[®] Seal is an impregnator that seals the concrete surface. Lithurin[®] Seal is water-based and does not change the concrete's colour. Lithurin[®] Seal penetrates and seals the surface evenly in the concrete, which produces less friction. The surface becomes a part of the structure with no cracking, flaking or scaling. The application provides long-term protection. Lithurin[®] is approved for use on concrete floors within the food industry and is partially water-repellent, anti-slip and makes cleaning easier.

Area of application

1 x Lithurin[®] Seal as dust binder. Lower friction and higher abrasion resistance. 1 x Lithurin[®] Seal as hardener and sealer (moister curer/dust binder). Lower friction and higher abrasion resistance.

1 x Lithurin[®] Seal in combination with Lithurin[®] Hard increases abrasion resistance by up to 20 times.

Environmental benefits Lithurin[®] Seal

- Max VOC less than 1 g/l
- Water-based
- Odourless
- · Eliminates dust from the concrete, which produces better air quality

Benefits Lithurin® Seal

- Maximum seal.
- Restricts penetration of liquid.
- No flush cleaning.
- Durable a one-off application provides long-term protection.
- Fast drying time dry after 60 minutes, at a temp. of +15-18 °C.
- Can be used on new or existing concrete. Water-repellent effect.

Equipment needed

- Soft brush or mop.
- Low-pressure sprayer, mechanical sprayer or watering can with spray-nozzle.

Requirements for treatment with Lithurin® Seal

- Min. temp of +5 °C on the surface of the concrete (equivalent to an air temp. of +10 °C)
- The surface must be free of contaminants
- In treatment of old floors, the surface must be grinded clean before application
- Lithurin[®] Hard/Dens must dry before Lithurin[®] Seal is applied









LAYING INSTRUCTIONS LITHURIN® SEAL

Instructions for Lithurin[®] Seal

- 1. Apply with a low-pressure sprayer or a can with spray-nozzle
- 2. Work the material into the surface with a soft brush to ensure good absorption. Keep the surface damp (at a temp. of +10-13 °C) for approx. 15-20 minutes.
- 3. If the surface starts to dry, wet it with more Lithurin[®] Seal. Ensure that no part of the surface dries during the absorption period. The material becomes sticky if it takes too long, particularly with higher temperatures.
- 4. Remove excess material with the brush, while the material is still fluid. (Apply with pressure on the brush to remove excess material).
- 5. Be sure to remove all excess material that the floor doesn't absorb.
- 6. The simplest method is to use steps 1 to 6, in stages of 100 m^2 per person. (2 persons = 200 m^2)
- 7. To ensure that the concrete surface receives the right amount of material, the instructions above must be followed.
- 8. Under certain conditions, e.g. low temperature, strong wind etc., the absorption time is longer and at higher temperatures the absorption time is shorter.

Consumption:

- Machine trowelled surface: approx. 0.15 litres/m²
- Non-machine trowelled surface: approx. 0.2-0.4 litres/m²















STAIN WASH

Protection against stains on concrete floors

All concrete floors need to be impregnated to achieve a resistant and easy to clean surface.

For hardening, densifying and sealing we have the Lithurin range of products HARD, DENS and SEAL.

For more information: Visit <u>www.lindec.com</u>.

Extend the protection against stains on treated concrete surfaces with STAIN WASH.

Concrete is an absorbent material, after impregnated, the surface becomes less absorbent. Depending on the type of impregnation and concrete quality performed varies protection.

STAIN WASH rejects fluid and sparkles on the surface and increases protection against discoloration of spilled liquids. Depending on the type of usage area floor, the protection decreases over time. But can be easily treated again on the surfaces used most.

Use Concrete soap for daily cleaning. Be sure not to use acidic or basic cleansers – they will affect that concrete surface.

Laying instruction

The concrete surface should be clean and free from pollution. The lowest temperature for application of STAIN WASH is $+5^{\circ}$ C.

Instructions for STAIN WASH

- 1. Apply with low pressure spray or can with spray.
- 2. Work the material into the surface with scrubber-machine and LC
- ider Pad 1000 until surface are saturated.
- 3. Remove excess material with Lindec mop.
- 4. Make sure to remove all the excess material that the floor does not absorb.
- 5. Allow to dry.
- 6. Follow step 1 to 5, in stages of 100 m² at a time per person.
- $(2 \text{ persons} = 200 \text{ m}^2).$
- 7. In order to apply the concrete surface with the right amount of material, the instructions above must be followed.

8. Under certain conditions, eg, low temperatures, strong winds, etc., the absorption time is longer and at higher temperatures the absorption time is shorter.

After polishing

When the material has dried:

- Dry buff with fine scouring nylon type LC Rider Pad 1500/3000
- Alternatively

- Scrub the surface with a scrubber-dryer machine with fine scouring nylon type LC Rider Pad 1500/3000

Consumption

Machine troweled surface: approx. 0,10-0,15 liter/m². In certain circumstances, such as low temperatures, the absorption time will be longer and in higher temperatures it will be shorter.







CONCRETE SOAP[®] CLEANSER & MAINTENENCE CONCRETE SOAP[®]

Product description:

Lindec Concrete Soap[®] is specially developed to impregnate and maintain concrete, hard concrete, diamond grinded and polished concrete surfaces. Lindec Concrete Soap[®] is used for daily cleaning and protects the concrete from discoloring and makes it dirt repellent and easy to maintain. Lindec Concrete Soap[®] gives the floor a natural shine when used regulary. Lindec Concrete Soap[®] leaves no water marks.

Daily cleaning is extremely important not only for keeping the floor clean but also for the well-being of your personnel.

Lindec Concrete Soap[®] prevents water-soluble dirt from being absorbed by the micropores of the surface, prevents slipping, and is recommended for use on industrial floors, in workshops and in warehouses etc. It can also be used on floors with heavy lime precipitation.

In order to prolong the lifetime of a concrete floor, you should only use recommended maintenance materials. Avoid solvents and other aggressive chemicals.

For best results, your floors should be cleaned at regular intervals, and a scrubber dryer (scrubs and vacuums) is the most suitable equipment. A nylon scouring pad should be used during the initial period in order to remove lime deposits and building residue. We recommend black nylon scouring pad for the first two months, followed by red. (The color determines the amount of abrasive agent). It is also possible to apply the material manually, but this is less efficient.



Consumption:

Material consumption / m ²	Concrete Soap®:	Water:	Scouring pad:
1.) Manual application:	1 dl	5 liter	Applicator
2.) Cleaning/impregnation with scrubber dryer:	1 liter	10 liter	Black
3.) Daily cleaning with scrubber dryer:	0,5-1 dl	10 liter	Red

Consumption approx 0,010 liter per m² at daily cleaning (3.)

Contents:

Soap of selected fatty acids.

Transport and storage:

Can be transported without heating. Fully usable after thawing and stirring. Can be stored for 2 years if kept unopened above +2°C.

Packaging:

Plastic can, 25 liter.

Nylon scouring pads:

Art. No 1360 Black pad (sapphire) 16". Art. No 1365 Red pad 16". Art. No 1352 polish pad (180) 16". Art. No 1354 polish pad (320) 16".





Lindec Tools

Product	Article	Description	
APPLIANCE	TOOLS		
0	2220	Duct tape, model 300 grey, 50 mm x 50 m Duct tape with exellent adhesion to concrete to use in combination with plastic film and for covering before pouring concrete. <i>Packing details:</i> 24 rolls per box, 1152 rolls per pallet	
	3020	Plastic film 0,035 x 2m x 400 m (800 m ² /roll) Plastic film to be used as moisture curing in combination with water on top on freshly applied concrete, not folded for quicker application. <i>Packing details:</i> 24 rolls per pallet	
	3060	Plastic film 0,07 x 1,3m x 100 m (130 m²/roll) Plastic film to be used as wall and pillar covering, not folded for quicker application. <i>Packing details:</i> 72 rolls per pallet	
	3154	Plastic film 0,15 x 2m x 200 m (400 m ² /roll) Plastic film to be used as kapilar protection under the concrete, not folded for quicker application. Packing details: 18 rolls per pallet	



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