



## Production Description

**SOLIDUS®** is a clear solution of liquid magnesium fluosilicate and wetting agent which is designed to harden, densify, and dustproof concrete surfaces that are 10 or more days old. This solution chemically reacts with the free lime and calcium carbonate present in the concrete, creating a stone hard mineral surface. Free lime present in concrete creates soft surfaces that are readily destroyed by normal wear. **SOLIDUS®** converts the free lime into compounds approaching quartz in hardness and barely scratchable. It also acts to restrict the movement of the free lime to the concrete surface thus dustproofing the concrete. Densifying the surface reduces its absorptiveness. Due to the inherent insolubility of the compounds created, surfaces treated impart good chemical resistance to most organic acids, vegetable and animal fats, fatty oils, petroleum solvents, oils and greases. Treated surfaces also offer good momentary contact resistance to inorganic acids such as muriatic, nitric and sulfuric allowing adequate time for spillages to be flushed away before erosion takes place.

**SOLIDUS®** will not distort the physical characteristics of the concrete or prevent normal adhesion of other products when it is applied according to instructions.

**SOLIDUS®** can be used on interior or exterior concrete floors, decks, ramps, and pavements. It is a colorless solution that will not stain concrete, and is therefore safe for architectural type concrete. **SOLIDUS®** is most often specified where a harder, abrasion resistant concrete surface is required. On aged concrete, it provides a new hardwearing surface especially when the surface has begun dusting or granulating.

Treated steel-trowelled concrete surfaces develop a distinctive polished sheen from traffic over a period of time, greatly reducing cleaning and maintenance costs.

Surface may be painted, carpeted, or tiled, without further modification. **SOLIDUS®** is compatible with and provides good adhesion for oil and water based latex paints, latex and asphaltic cutback type adhesives, asphalt hot and cold pour joint sealants.

## Installation

Before using this product, please refer to the Material Safety Data Sheet for additional information. Proper handling precautions **MUST** be followed. The conditions of use, handling, and application of this product and information (whether verbal or written), including any suggested formulations and recommendations, are beyond Lambert Corporation's control. Therefore, it is imperative that testing be performed to determine satisfaction and suitability for intended use and health, safety, and environmental issues. The following information is meant as a guideline of best industry practices. While Lambert Corporation does suggest adherence to these guidelines, unforeseeable variables and/or developed successful installer practices may cause variation in methods and/or results.

## Surface Preparation

Concrete surfaces should be cured a minimum of 10 days to allow for **SOLIDUS®** penetration and hardening from within the concrete. Surface must be clean, dry and free of all dirt, curing or parting compounds, oil sealers or other residues that would interfere with normal penetration. Use Lambert's citrus cleaner for oil stains and general cleaning.

## Specifier's Note

Specifications for concrete yet to be placed that will be treated with **SOLIDUS®** should be, if possible, water cured. If a curing compound is necessary, use a compatible Lambert product. Membrane forming curing compounds are not recommended. Note that Lambert's curing compounds not only cure, but harden surfaces, thus it is possible that less applications of **SOLIDUS®** will sufficiently harden the concrete.

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## Old Concrete

Thoroughly clean and remove all foreign material from the concrete surface. Acid etch to open pores if concrete has an extremely smooth, tight surface. Allow to dry 24 hours. Apply **SOLIDUS®** over the clean, dry surface. Each coat must be applied only on a clean, visually dry concrete surface.

## Application

Apply to form a continuous, uniform film by hand or power spray, a soft bristle push broom, long-nap roller, squeegee, or mop. The type of surface and square footage to be covered will determine the best method of application. Each coat should be allowed to dry thoroughly before the next one is applied. On horizontal surfaces, the **SOLIDUS®** may be liberally poured on the concrete and then spread out evenly, making sure no puddles remain.

Surface-wear ability and dustproofing qualities of concrete increase proportionally with each additional application. No more than three (3) applications should be required. If white crystals develop on the surface after first or second coat, the mix is too strong or the surface has reached maximum hardness. If this happens, flush the surface with clean, hot water and brush with a stiff bristle brush. After brushing, flush with clean water.

To ensure proper application with sprayers, use only a clean or new industrial grade sprayer equipped with a non-adjustable fan tipped nozzle, neoprene hose and gaskets. Maintain sufficient pump pressure throughout application. Uniform surface coverage is essential. Avoid "puddling" in low areas. If material starts to come out in a stream, versus a fog, or starts to come out in spits and sputters, the nozzle has become clogged. Stop immediately and clean nozzle with water before proceeding. Clean the sprayer immediately after use with water flush. Hot water is best for quick cleaning.

### Packaging:

55-gal (208.2-L)  
Drum

5-gal (18.9-L)  
Pail



**SURFACE HARDENERS**

**SOLIDUS®**

MASTER FORMAT: 03 01 30 . 72  
03 31 00

### Caution

**SOLIDUS®** is toxic and trades should use appropriate precautions. When applying it workers should wear rubber boots and rubber gloves. Product is corrosive to glass, metal and painted surfaces. Protect metal, glass, wood, paint and brick from contact with **SOLIDUS®**. If accidentally misapplied, immediately wash with clean, preferably hot, water.

### Limitations

Concrete mix is extremely important when considering the use of **SOLIDUS®**. High mixes of "fly ash" (over 20%) can cause potential failures and reduce or eliminate the ability of **SOLIDUS®** to work properly. It is important to diligently review mix ratios, and perform test applications before applying this product.

**SOLIDUS®** will not salvage honeycombed or structurally unsound concrete. It is designed to make good concrete surfaces more dense/hard.

Protect all metal, glass, wood, paint, brick, etc., from contact with **SOLIDUS®** during application. **IF ACCIDENTALLY MISAPPLIED, WASH WITH CLEAN WATER BEFORE MATERIAL DRIES.**

Allow at least 7 days interval before applying tile or floor covering adhesives over **SOLIDUS®**. Do not apply to floors that have been previously sealed or treated with resin or wax based curing or parting compounds unless these type compounds have been chemically or mechanically removed. **SOLIDUS®** is not for use on latex or epoxy modified concrete, concrete with high levels of fly ash, or colored concrete.

Dry time is approximately 1 to 4 hours under normal weather conditions. High humidity and cooler temperatures will lengthen drying time. Allow to dry before opening to traffic.

Do not store **SOLIDUS®** below freezing temperatures. Prolonged freezing may damage contents. Frozen material should immediately be placed in a warm environment for gradual thaw. Direct heat should not be applied. If product can be stirred easily after thawing, hardening qualities most likely have not been lost. Apply a test area to determine hardening qualities of the frozen material.

### Technical Data

- Corps of Engineers Specification CE 204
- Federal Job Specifications for zinc and magnesium fluosilicate concrete hardeners.

### Coverage

**Never apply SOLIDUS undiluted.**

Industrial Application – Two coats

**For Rough porous finished surfaces** apply first coat diluted one (1) gallon (3.79L) **SOLIDUS®** to one (1) gallon (3.79L) water, which will cover approximately 100-300 square feet (9.29-27.87m<sup>2</sup>). Second coat should be diluted two (2) gallons (7.57 liters) **SOLIDUS®** to one (1) gallon (3.78 liters) water, which will cover approximately 100-300 square feet (9.29-27.87 m<sup>2</sup>).

**For Heavy-trowelled, dense, non-porous surfaces** apply first coat diluted one (1) gallon (3.79L) **SOLIDUS®** to three (3) gallons (11.36L) water, which will cover approximately 100-300 square feet (9.29-27.87m<sup>2</sup>). Second coat should be diluted one (1) gallon (3.79L) **SOLIDUS®** to two (2) gallons (7.57L) water, which will cover approximately 100-300 square feet (9.29-27.87m<sup>2</sup>).

Residential Application – One coat

**For residential application** apply one coat diluted one (1) gallon (3.79L) **SOLIDUS®** to one (1) gallon (3.79L) water, which will cover 100 square feet (9.29m<sup>2</sup>).

### Clean-Up

Clean sprayers, brushes, tools, and equipment with water.

### First Aid

Repeated or prolonged skin or eye contact may cause injury. Prevent contact with skin and eyes. If contact occurs, immediately flush affected area thoroughly with plenty of water.

Do not take internally. May cause irritation of mouth, throat and stomach if ingested. If ingested, **DO NOT INDUCE VOMITING**. Should vomiting occur, be sure to keep head below hips to avoid aspiration into the lungs.

**KEEP OUT OF REACH OF CHILDREN.  
FOR INDUSTRIAL USE ONLY.**