SunCast SL

TECH - APP - SHEET

PRODUCT DESCRIPTION AND USE

SunCast SL is a flowable self-leveling polyurethane mortar installed at 1/8th to 1/4 inch to protect concrete from physical and chemical abuse. It is very resistant to impact and abrasion. It is unaffected by animal fats and most solvents. SunCast SL has a co-efficient of thermal expansion similar to concrete which allows it to maintain adhesion when subjected to the thermal shock of hot water. It can be used at constant service temperatures up to 200°F. SunCast SL can be purchased with an anti-microbial additive to inhibit the growth of bacteria and microorganisms.

SunCast SL is a quick turnaround flooring solution for businesses that must minimize down time. It is usually installed without a primer or top coat and can be returned to service 12-24 hours after installation. SunCast SL is available in two formulations, regular and fast cure. The regular cure provides more work time than the fast cure material and makes the installation much easier at temperatures over 70°F. SunCast SL is an environmentally friendly product. It contains no VOC, has very little odor and is made with natural sustainable raw materials. Because of its unique combination of performance properties, SunCast SL has become the polymer flooring of choice for the demanding service conditions found in food and beverage processing industries. Other areas of use include commercial kitchens, chemical processing, pulp and paper plants and wastewater treatment facilities

Chemical Composition
Aromatic polyurethane concrete.

Colors
8 standard colors available

Limitations
* Material will amber when exposed to UV light.
* Do not apply material in direct sunlight.
* Do not apply when temperatures are below 45°F or above 90°F.

TECHNICAL DATA

Physical Properties

Solids Content, % 100
Mixing Ratio, ... Kit Packaging
Pot Life, Regular Cure (70 degrees, 1 gallon mass) ..... 25 minutes
Pot Life, Fast Cure (70 degrees, 1 gallon mass) ..... 15 minutes

Pot Life is reduced by increasing temperature and/or mass.

Cure Times (70 degrees)

Regular Cure		Fast Cure	
Dry to Touch	12 hours	Dry to Touch	6 hours
Return to Service	24-36 hours	Return to Service	12-24 hours

Cure times are influenced by both the ambient air temperature and the temperature of the concrete.

Performance Properties

Tensile Strength, psi (ASTM D-638)..... 950
Ultimate Compressive Strength, psi (ASTM D-695) 8,651
Ultimate Flexural Strength, psi (ASTM D-790) 3,221
Hardness, Shore D (ASTM D-2240) 80
Adhesion to Concrete (ASTM 451) ..... concrete fails before loss of bond

CHEMICAL RESISTANCE

The chemical resistance of a coating material is influenced by many factors, including exposure to a mixture of chemicals, service temperature and housekeeping practices. Successful engineering of the coating system must also take into consideration such factors as substrate design, temperature cycling and anticipated thermal and mechanical shock. Users are urged to consult our technical service department for recommendations on the specific project. Whenever possible, a sample should be tested under actual or simulated field conditions before a decision is made on the suitability of a given system.

The following chart is a guide to the resistance properties. Testing was conducted at room temperature on samples cured for 7 days.

Key:
1. - Suitable for continuous contact
2. - Suitable for intermittent spills and continuous contact up to 72 hours
3. - Suitable for intermittent spills if followed promptly by water flushing
4. - Not recommended

*Coating stains when exposed to this chemical

Acetic Acid, 15%	1	Formaldehyde	1
Acetic Acid, 25%	1	Formic Acid 25%	1
Acetic Acid, Glacial	2	Hydrobromic Acid, 48%	*1
Acetone	4	Hydrochloric Acid, 37%	*1
Aluminum Chloride	1	Hydrofluoric Acid 25%	*2
Aluminum Nitrate	1	Hydrogen Peroxide, 30%	1

Aluminum Sulfate 1	Lactic Acid, 50% 1
Ammonium Hydroxide 1	Lactic Acid, 85% 2
Ammonium Nitrate 1	Jet Fuel 3
Ammonium Sulfate 1	Isopropyl Alcohol 1
Aniline 2	Maleic Acid, 40% 2
Barium Chloride 1	Methanol 2
Barium Hydroxide 1	Methylene Chloride 3
Barium Sulfide 1	Methyl Ethyl Ketone 3
Beer 1	Nitric Acid, 15% *1
Benzene 1	Oleic Acid 1
Brake Fluid..... 1	Phosphoric Acid, 85% 1
Boric Acid 1	Potassium Chloride 1
N-Butyric Acid, 50% 2	Potassium Cyanide 1
Calcium Chloride 1	Potassium Hydroxide 1
Calcium Hydroxide 1	Potassium Nitrate 1
Calcium Nitrate 1	Potassium Sulfate 1
Calcium Sulfate 1	Skydrol 1
Chloroform 1	Sodium Hydroxide, 50% 1
Chromic Acid, 50% *1	Sodium Chloride 1
Citric acid, 50% 1	Sulfuric Acid, 50% *1
Cola Syrup 1	Tetrahydrofuran 3
Copper Chloride 1	Toluene 3
Copper Nitrate 1	Trichlorethylene 3
Copper Sulfate 1	Trichlorethane 2
Diesel Fuel 2	Urea 1
Ethyl Acetate..... 2	Xylene 1
Ethyl Alcohol 2	

GENERAL INFORMATION

Surface Preparation

Concrete surfaces must be clean, dry, and structurally sound. Surface must be shot blasted or scarified to CSP 3 to CSP 5. Keyways must be cut at 1/4’’deep by 3/16th wide, 6 inches from all perimeter walls, machinery pedestals, and both sides of all control joints and at regular intervals spaced 10-12 feet apart throughout the flooring system. All floor drains and termination points must have a 1/4’’ deep by 1/4’’ wide keyway. **Never feather edge SunCast SL, always turn it into a keyway.** Priming of concrete substrates is not usually required under typical circumstances. However, due to variations in concrete quality, surface conditions, surface preparation and ambient conditions, reference test areas are recommended to determine whether priming is required to prevent the possibility of blisters, pinholes and other aesthetic variations. If priming is required, use Epoxy 100 applied at the rate of 200-250 sq. ft. per gallon. Proceed with SunCast SL when primed surface has become tack-free.

Moisture Vapor Emissions Precautions

All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator’s responsibility to conduct calcium chloride and relative humidity probe testing to determine if excessive levels of vapor emissions are present before applying any coatings. Sundeck Products USA, Inc. can supply moisture remediation products. Consult our technical service department. SDP and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

Mixing Instructions
Pour entire contents of parts A, B and C into mixing container and mix for 30 seconds. Then slowly add part D (aggregate) over a period of about 15 seconds. Once all of the components are incorporated, mix for an additional 30 seconds. Mixing should be done with a Kohl type mixer or any other mixer designed to mix heavy mortars. Mixed material should be placed immediately. It is recommended that multiple mixing containers be used to insure an adequate supply of fresh material.

Application Recommendations
Under normal circumstances, SunCast SL is applied directly to the concrete without a primer. However, if the concrete is excessively porous, the use of SunEpoxy 54 as a primer can reduce outgassing, pinholes or blisters. A test area is recommended to determine if a primer should be used. For small areas, SunCast SL can be metered out and finished with a steel trowel. For large areas, a gauge rake is required. Once the slurry is raked to the desired thickness, immediately roll the surface with a looped roller or spiked roller to remove any imperfections and bring the resin to the top. It is very important to keep a wet edge. Each batch must be placed within 10 minutes of the prior one. Failure to due this could result in a visible tie in line. For wet areas, it is recommended that SunCast SL-B be installed. The SunCast SL-B system incorporates a broadcast of colored quartz to refusal, with an optional top coat of SunEpoxy 600, 900, or SunOne.

Coverage per kit is as follows:

Floor Thickness Coverage Per Kit
1/8th 35 Square Feet
3/16th 20 Square Feet
1/4 inch 17 Square Feet

Handling Precautions
Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.

Slip and Fall Precautions
OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slip-resistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. Sundeck Products USA, Inc. recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards. Sundeck Products USA, Inc. or its sales agents will not be responsible for injury incurred in a slip and fall accident.