**DIVISION 03 53 00 - CONCRETE TOPPING** 





### **KNOW YOUR MIX**

Sakrete® Fast Setting Self-Leveling Resurfacer is a rapid setting cement-based product for resurfacing concrete floors with damaged finishes or as a wear surface for residential and light foot traffic industrial floors where a hard, flat and smooth surface is desired. Also use as an underlayment for installation of ceramic tile, stone, resilient flooring, carpet, or other finished flooring.







1/8-1"



PSI



YIELD

### YEILD/COVERAGE/WATER

PACKAGE SIZE	NOMINAL THICKNESS	APPROXIMATE COVERAGE	WATER REQUIRED
	1/8 in	44.0 ft <sup>2</sup>	
	3 mm	4.09 m <sup>2</sup>	
50 lb	1⁄4 in	22.0 ft <sup>2</sup>	4.75 qts
22.7 kg	6 mm	2.04 m <sup>2</sup>	4.5 L
	½ in	11.0 ft <sup>2</sup>	
	12 mm	1.02 m <sup>2</sup>	

### **TECHNICAL DATA**

FLOW	FINAL SET TIME	LENGTH CHANGE	ASTM CERTIFICATIONS
120 – 140 mm	75 – 90 minutes	< =/- 0.10%	ASTM C1708 ASTM C191 ASTM C157

COMPRESSIVE STRENGTH			FLEXURAL STRENGTH	ASTM CERTIFICATIONS
PSI - 1 DAY	PSI - 7 DAY	PSI - 28 DAY	<b>PSI - 28 DAY</b>	ASTM C109 ASTM C348
4,000 psi 27.6 MPa	5,500 psi 37.9 MPa	7,000 psi 46.4 MPa	1,200 psi 8.3 MPa	

### **FEATURES**

- Approximately 15-minute working time
- Sets in approximately 75-90 minutes
- Accepts foot traffic in 2-3 hours and ready for non-moisture-sensitive flooring in 4 hours
- Provides a hard, flat and smooth surface
- Underlayment or wear surface
- Applications from  $\frac{1}{8}$ " to 1" and can be featheredged to adjoining elevations
- 7,000 psi (46.4 MPa) at 28 days



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### **USE FOR**

- Indoor and Outdoor applications
- Damaged concrete floors
- APA rated exterior grade/exposure 1 plywood or OSB equivalent with expanded metal lath

### **TOOLS**

Fast Setting Self Leveling Resurfacer is a specialty mixture that requires non-standard tools. Before beginning work, ensure you have the following:

- 1. Heavy duty  $\frac{1}{2}$  in. drill capable of 400 600 RPM speeds
- 2. Gauge rake and/or concrete smoother
- 3. Spiked roller

### **PREPARATION**

#### **CONCRETE:**

- 1. All materials should be stored between 40° F (4° C) and 80° F (27° C) 24 hours prior to installation.
- 2. Concrete must be fully cured (28 days minimum), free of efflorescence, and not subject to hydrostatic pressure or moisture condensation.
- 3. All surfaces must be clean, stable, solid, and structurally sound. Remove all unsound concrete, grease, oil, dirt, paint, sealers, curing compounds, waxes, old adhesive residue, gypsum based underlayments, old flooring, and any other foreign materials that will inhibit adhesion. Mechanical removal is recommended, chemicals often serve to drive them deeper into the concrete substrate.
- 4. Maximum bond over a concrete substrate can be achieved by mechanically profiling the surface either by grinding, shot blasting, sand blasting or scarifying to achieve an ICRI CSP3 to CSP5 standard. Structurally sound concrete that is porous, and has not been troweled smooth and flat may not require mechanical profiling. Typical applications that fall into this category include precast concrete floor panels, or concrete in new construction that is left unfinished in anticipation of receiving self-leveling underlayment.
- 5. Repair deep areas, holes, and non-moving cracks with Sakrete Top 'N Bond or an appropriate concrete repair product prior to the application of the selfleveling and allow curing as recommended for the product.
- 6. All surfaces require priming using a self-leveling bonding primer. Allow primer to dry to the touch.
- 7. Isolate and install a bond breaker, using ¼ in. (6 mm) foam tape or caulking, where vertical surfaces meet new toppings and at all perimeters and sharp corners such as column bases, pedestals, supports, etc.

### WOOD SUBSTRATES:

Residential and light commercial foot traffic, interior applications only

- 1. Follow Tile Council of North America (TCNA) F185 installation method for cementitious self-leveling underlayments over wood.
- 2. All wood subfloors must be structurally sound and securely fastened. When using as an underlayment the maximum deflection allowed is L/360 for ceramic tile, or L/720 for stone (including live, dead, impact and concentrated loads).
- 3. The wood must be either ¾ in. (19 mm) tongue and groove, APA rated exterior grade/exposure 1 plywood or OSB underlayment grade equivalent.
- 4. The surface must be clean, free from any contaminants that may act as bond breakers such as dirt, paint, wall compound, varnish, grease, oils, or wax. All loose boards must be refastened and sound.
- 5. Allow a 1/6 in. (3 mm) gap between sheets. Fill gaps and all nail holes or areas where flow could leak with caulk.
- 6. Prime clean surface with a self-leveling bonding primer that is designed for wood substrates. Allow primer to dry to the touch.
- 7. Securely fasten every 4 6 in. (10 15 cm) either galvanized metal lath or plastic lath designed for this purpose to the wood surface after priming, and prior to applying self-leveling cement. Overlap lath edges by ¼ in. (6 mm) and secure using a minimum ¾ in. (19 mm) staple with no gaps, keeping lath flat. Be sure to offset lath joints. To keep the job moving, it is helpful to prime first, then stand on the lath while fastening securely.
- 8. Install expansion joints where self-leveling cement meets restraining surfaces such as perimeter walls and sharp corners such as column bases, pedestals, supports, etc. using ¼ in. (6 mm) foam tape or caulking.
- 9. When using Sakrete Fast-Setting Self-Leveling Resurfacer over lath, install no less than ¼ in. (6 mm) thickness of self-leveling above the surface of the lath.

Note: Before installing Sakrete Fast Setting Self-Leveling Resurfacer the installer is responsible for ensuring that the wood subfloor is structurally sound, clean and capable of support the weight.

### **REFER TO:**

ACI 305R Guide to Hot Weather Concreting ACI 306R Guide to Cold Weather Concreting

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### **MIXING**

- 1. In a clean 5 gal. container, add 4.75 quarts (4.5L) of clean, cool, potable water. Next add the 50 lb. (22.7 kg) bag of powder, while mixing at full speed using a square mortar paddle mixing blade attached to a heavy-duty ½ in. drill (400 600 rpm). Measure water carefully, be accurate, DO NOT ADD EXTRA WATER or segregation and soft surfaces can occur.
- 2. Mix completely for a minimum of 2 3 minutes until lump free, adding no additional water. Avoid overwatering, over mixing, or moving the mixer up and down during mixing as this will entrap air, lower the strength, and may cause cracking and/or pin-holing. The formation of a white film on the surface is an indication of over watering. Note that hard lumps after mixing are an indication of defective product, which should not be used.
- 3. For larger jobs, to keep the job moving, it is recommended that multiple mixing containers be used simultaneously. This will allow one mixing container to be poured while the other is being mixed.
- 4. After use clean all mixing equipment thoroughly to avoid hardened product in subsequent batches.
- 5. Fast Setting Self-Leveling Resurfacer may be extended up to 50% with clean pea gravel (% in.) for areas deeper than 1 inch (25 mm). For best results, apply a final % in. to 1 in. (6-25 mm) topping layer without extension. A selfleveling primer must be used when layering.

### **PLACEMENT**

- 1. Apply only to surfaces that are frost free and between  $50^{\circ} 90^{\circ}$  F ( $10^{\circ} 32^{\circ}$  C) for 24 hours prior and 48 hours after application.
- 2. Close all interior windows, doors, and HVAC vents to minimize air flow. Protect exterior application areas from excessive drying due to temperatures, air movement, direct sunlight and rainfall.
- 3. Divide the areas to permit continuous placement without cold joints.
- 4. Pour the blended Sakrete Fast Setting Self-Leveling Resurfacer directly from the mixing container across the surface in a continuous, uniform manner to achieve a flat, level surface. The mixed compound remains workable for approximately 15 20 minutes.
- 5. Use a gauge rake or a smoother as needed, but avoid overworking the material. The product will self level, so there is no need to trowel the surface.
- 6. Best results are obtained by pouring across the shorter dimension of the room. Pour in continuous strips about 1 foot (31 cm) wide. Maintaining a wet edge throughout the pour is critical for blending successive pours together.
- 7. Use a spiked roller to blend successive pours together. The roller helps remove air bubbles that may have formed during mixing.
- 8. Troweling is not recommended. Do not overwork material once it is on the floor.
- 9. Honor all existing expansion joints, control joints, and moving cracks through the resurfacer application. Failure to do so could result in delamination or cracking.
- 10. If a higher build-up is needed over the first pour, allow 24 hours drying time between pours and prime surface again with a self-leveling bonding primer.
- 11. Sakrete Fast Setting Self-Leveling Resurfacer will not correct or compensate for a structurally defective substrate. Faults in the substrate will appear in the resurfacer. The use of alkali resistant glass fabric or galvanized metal reinforcing (Federal Specification QQL.101C) can be helpful in reducing reflective cracking.
- 12. Typically surfaces will accept foot traffic in 2 3 hours, non-moisture sensitive tile and stone in 4 hours and resilient flooring (carpet, LVT) in 16 24 hours at temperatures of 72° F (22° C). For wood flooring, refer to manufacturer's recommendations.
- 13. Before laying floor tiles and other flooring materials test for MVER (moisture vapor emission rate, reference ASTM F1869) and concrete substrate's relative humidity (RH, reference ASTM F2170). The requirements of the floor covering and floor adhesive manufacturers must be followed with respect to, but not limited to, levels of moisture.

### **NOTES AND LIMITATIONS**

- 1. Sakrete Fast Setting Self-Leveling Resurfacer may be used for outdoor applications, the smooth surface may prove too slippery when wet. To provide better traction, a light broom finish may be applied when material has reached initial set. Most outdoor applications require the surface to slope for drainage, however Fast Setting Self-Leveling Resurfacer flows easily to provide a level surface and will not provide that slope.
- 2. Do not over trowel or over work.
- 3. Metal or plastic lath design for this purpose is required when going over wood subfloors (interior applications only), it is not needed over properly prepared concrete surfaces.
- 4. When using lath, install no less than ½ in. (6 mm) thickness of self-leveling about the lath surface.
- 5. Do not install over dimensionally unstable substrates such as gypsum, gypsum based patching compounds, particle board, luan, asbestos, or chip board.
- 6. Do not install over old tacky or pressure sensitive adhesive residue, paints, sealers, curing compounds, old flooring, and other foreign materials.
- 7. Do not allow heavy or sharp metal objects to be dragged directly across the fresh surface. Protect new surface from use until material is completely hard and set.
- 8. Protect from excessive drying due to change in temperatures, air movement, and direct sunlight.
- 9. The use of damp curing or the use of curing compounds is not recommended.
- 10. Allow 14 days curing time before turning on in-floor radiant heating systems, bring heat up slowly during the first usage.
- 11. Rubber gloves and goggles are recommended safety equipment.
- 12. Store in tightly sealed original factory container.
- 13. Air, mix and substrate temperatures should be between 40° F (4° C) and 80° F (27° C) and no rain in the forecast within 24 hours of application.
- 14. Protect from freezing for 48 hours.

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### **CLEAN UP**

Use warm, soapy water for cleaning hands and tools while product is wet. Sakrete concrete mortar dissolver can be used if dried or hardened on tools and equipment.

NOTE: Proper application and installation of all Sakrete products are the responsibility of the end user.

### SAFETY







#### **DANGER HAZARD STATEMENT**

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to lungs through prolonged or repeated exposure.

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing, Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents and container in accordance with all local, regional, national and international regulations.



**MARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

### KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.

For additional information, call the manufacturer at 866-725-7383 or Chemtrec at 800-424-9300 or 703-527-3887 outside of USA. Refer to Safety Data Sheet (SDS) for further information.

### LIMITED PRODUCT WARRANTY

The manufacturer warrants that this product is free from defects in material and workmanship and will perform per the manufacturer product literature in effect at the time of purchase. This warranty is for one (1) year from the date of purchase. Any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this express warranty. This warranty applied only if the product is used, in strict accord with manufacturer published instructions. The sole and exclusive remedy under this warranty is replacement of the defective product or refund of the purchase price, at manufacturer's option. CONSEQUENTIAL, SPECIAL, AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY. All claims under this warranty must be submitted to manufacturer by calling 866-725-7383. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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For current and complete product information, contact SAKRETE Technical Services toll-free at 866-725-7383 or visit Sakrete.com