



## DATA SHEET NO. 3900-400

# FLOOR-TOP® STG Standard-Grade, Self-Levelling Topping/Underlayment

### DESCRIPTION

FLOOR-TOP STG is a standard traffic-grade, single-component, shrinkage-compensated, self-levelling floor topping and underlayment that may be pumped or poured. FLOOR-TOP STG is specially designed to smooth out uneven, rough or deteriorated interior concrete floors.

### USES

This product is ideal for smoothing out and levelling concrete and rigid-based interior substrates prior to the application of a flooring system or coating. FLOOR-TOP STG cures to a hard, traffic-wearing surface suitable for foot and light rubber-wheeled traffic. FLOOR-TOP STG may be colour enhanced with integral colours, dyes, coatings, sealers, or acid stains. The product is designed for residential, commercial, retail, and office applications. It is not suitable for steel-wheeled traffic or forklift applications.

### FEATURES/BENEFITS

- May be applied up to 25.4 mm (1") thick in a single application.
- Single-component; only requires addition of water.
- May be poured or pumped.
- Specifically designed for fast levelling of floors.
- May be acid stained or dyed.
- Suitable for engineered wood flooring systems.
- Accepts early foot traffic.
- Floor covering may be installed in as little as 18 hours.
- May be used with radiant heating floor systems.
- Compatible with LIQUI-HARD® concrete densifier and chemical hardener from W. R. MEADOWS.

### PACKAGING

22.7 kg (50 lb.) bags. FLOOR-TOP PRIMER is available in 3.78 litre (1 U.S. gallon) units (four per case) or 18.9 litre (5 U.S. gallon) plastic pails with pour spout.

### COVERAGE/YIELD

Yield per 22.7 kg (50 lb.) bag is 0.014 m<sup>3</sup> (0.50 ft.<sup>3</sup>).

Depth mm (in.)	M <sup>2</sup> (ft. <sup>2</sup> ) per 22.7 kg (50 lb.) Unit
3.17 (1/8)	4.65 (50)
6.35 (1/4)	2.32 (25)
9.52 (3/8)	1.74 (18.75)
12.7 (1/2)	1.16 (12.5)
25.4 (1)	0.58 (6.25)

Yields listed above will vary based on substrate profile, variations in mix water amounts, and waste. Field trials should be performed to determine yields based on actual jobsite conditions. Note: FLOOR-TOP STG is a self-levelling product and will level to the slope of the floor; therefore, it is not practical to apply a uniform depth on a sloped floor. Meaning, if the desired minimum application depth is 6.35

mm (1/4") and the slope of the floor is 12.7 mm (1/2") from end to end, then the actual application will be 6.35 mm (1/4") to 12.7 mm (1/2") for an average depth of 9.52 mm (3/8").

FLOOR-TOP PRIMER yields 5 m<sup>2</sup>/L (400 ft.<sup>2</sup>/gal.) undiluted, depending on porosity of substrate.

### SHELF LIFE

Store on pallets in a cool, dry location. Do not store product outdoors. Shelf life of properly stored products is one year from date of manufacture when stored in unopened, original packaging.

### FINISHED APPEARANCE

Light grey. This is a natural mineral-based material and therefore colour variations and imperfections are normal, which enhance the overall appearance of the natural look. If FLOOR-TOP STG is to be left exposed, a test-board should be made prior to application to ensure that all the appropriate parties are satisfied with the final appearance. This procedure is a very common practice in the flooring industry.

### TECHNICAL DATA

The following physical properties were determined using the water-to-powder ratio of 5.19 litres (5.75 qt.) per 22.7 kg (50 lb.) bag at 23.5° C (72° F).

Set Time Per ASTM C 191	
Initial	60 minutes
Final	90 minutes
Working Time	30 minutes
Heal Time	15 minutes
Compressive Strength Per ASTM C 109	
@ 1 day	15.8 Mpa (2300 psi)
@ 7 days	20.7 Mpa (3000 psi)
@ 28 days	37.9 Mpa (5500 psi)
Flexural Strength Per ASTM 348	
@ 1 day	3.45 Mpa (500 psi)
@ 28 days	6.9 Mpa (1000 psi)
Drying Time	
Time to light foot traffic	4 hours
Time to application of flooring system	18-24 hours
Application thickness	25.4 mm (1") in single application

All technical data is typical information, but may vary due to testing methods, conditions, and procedures. Seasonable variations can be expected. Reasonable variations can be expected.

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## APPLICATION

**For Best Performance ...** FLOOR-TOP STG shall not be used as a repair mortar. Do not apply when the ambient, substrate, or product temperature is below 65° F (18.3° C). Protect from freezing. Product is designed for interior applications; do not use in exterior applications. Do not allow excessive water loss due to heat, sun, or wind. Do not add any admixtures. Do not featheredge. Exceeding liquid requirements shall result in reduced physical properties. Realize that set time, working time, and heal time will decrease as the product, air, substrate, and mixing liquid temperature increases. FLOOR-TOP STG is not suitable for wet, submerged, or similar environments. Sealing FLOOR-TOP STG will increase traffic-wearing service life. FLOOR-TOP STG which has been colour-enhanced should be sealed with a 100% all acrylic sealer designed for architectural concrete, such as DECRA-SEAL® W/B from W. R. MEADOWS, after final set. Failure to follow industry standard practices may result in decreased material performance.

**Subfloor Preparation ...** Repair subfloor with MEADOW-CRETE® or MEADOW-PATCH® repair products from W. R. MEADOWS 24 hours prior to application of FLOOR-TOP STG. Any defects in the substrate will propagate through to the surface. Do not bridge moving cracks. Extend existing control and expansion joints through FLOOR-TOP STG. Fill all non-moving, dry cracks with REZI-WELD™ LV from W. R. MEADOWS immediately prior to application of FLOOR-TOP STG.

Prepare concrete substrate in accordance with International Concrete Repair Institute (ICRI) Technical Guideline #310.2-1997: Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays. Mechanically roughen or high pressure water-jet existing concrete substrate to a minimum concrete surface profile (CSP) of CSP-4 or higher. Remove all unsound concrete and provide a profiled surface. Substrate must be structurally sound, dust-free, and free of grease, oil, dirt, curing compounds, release agents, or any other surface or penetrated contaminants that will adversely affect bond. Sanding, grinding or wire-abrading are not approved surface preparation methods. New concrete floors should have fully achieved designed compressive strength and be a minimum 28 days old.

Determine the moisture content and water vapour transmission rate of the subfloor prior to application of FLOOR-TOP STG. Floors must be completely dry and have a water vapour transmission rate < 1.36 kg/92.9 m<sup>2</sup> (3 lb./1000 ft.<sup>2</sup>) per 24 hours using a calcium chloride test (ASTM F 1869). The moisture content or water vapour transmission rate shall be determined to be acceptable for standard flooring systems and coatings prior to application of FLOOR-TOP STG.

The wood flooring system must conform to the requirements of "engineered approved wood subfloors" such as the National Floor Covering Association's floor covering specification manual. The wood floor must be sound and have no movement due to deflection. Such subfloor wood underlayments include APA-rated Group 1 exterior grade

plywood, CC-plugged or better conforming to US Product Standard PS-1 or COFI-Classified SELECT or exterior grade plywood conforming to CSA-0121 Standard for Douglas Fir. Use metal or synthetic lath in conjunction with the properly designed wood floor.

**Priming ...** Reference Primer Usage Chart for proper choice of primer based on substrate type.

Shake or mix FLOOR-TOP STG PRIMER prior to use. Dilute the high solids FLOOR-TOP STG PRIMER 1 to 1 by volume with cool, potable water. One gallon of undiluted primer will yield two gallons of usable primer. Apply FLOOR-TOP STG PRIMER at a rate of 5 m<sup>2</sup>/L (200 ft.<sup>2</sup>/gal.) using a short hair nap roller or garden-type sprayer. If sprayed, back roll using a short hair nap roller. Two applications of the diluted primer may be needed depending on substrate porosity. If two coats are required, allow the first coat of diluted primer to completely dry prior to application of second coat.

Allow diluted primer to completely dry prior to application of FLOOR-TOP STG. The dry time will vary with temperature and humidity, but is typically 1-3 hours. Do not puddle or pool the diluted primer. Proper surface preparation and application of the primer will ensure a good bond. Improper priming or surface preparation to condition the substrate may lead to reduced working time, poor flow, and leveling characteristics resulting in tool marks appearing in the finish coat. Insufficient priming and conditioning may lead to surface pinholes due to substrate air being released.

The diluted FLOOR-TOP STG PRIMER must be used within seven days after dilution; any remaining diluted primer after seven days must be discarded in accordance with local, state, and federal regulations. The diluted primer should be remixed prior to use.

Reference technical data sheet for proper application instructions for REZI-WELD LV prior to use with FLOOR-TOP STG.

**Mixing ...** Mix only complete bags. Condition the material between 18.3° - 35° C (65° - 85° F) overnight prior to use. Mix 5.43 – 5.90 L (5.75 - 6.25 quarts) of potable water per 22.7 kg (50 lb.) bag of FLOOR-TOP STG powder. Add 2/3 of the required amount of water to the mixing vessel. Then, slowly add FLOOR-TOP STG while mixing with a combination low speed, heavy-duty drill (minimum 750 rpm) and helical-type mixing blade, such as the COLLOMIX Hexafix Models MM, WK, MK, KR & KRK mixers. Paddle type, mud mixer or similar, are not recommended and may lead to surface defects in the final appearance. Mix for 2-3 minutes or until homogenous and lump-free. Add the remaining 1/3 water and continue mixing the product until it is homogenous and lump-free. Overwatering of the product will result in a light greyish white powdery residue and discolored stratification lines in the finished surface. Lightly sanding the surface as described under the section titled SURFACE ENHANCEMENTS below will aid in hiding some of the discolouration. Overwatering will appear as foaming on the surface and segregation of the sand on the pail bottom.

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**WARRANTY:** W. R. Meadows of Canada warrants that, at the time and place we make shipment, our materials will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM OF TRADE OR OTHERWISE. As the exclusive remedy for breach of this Warranty, we will replace defective materials, provided, however, that the buyer examine the materials when received and promptly notify us in writing of any defect before the materials are used or incorporated into a structure. Three (3) months after W. R. Meadows of Canada has shipped the materials, all our Warranty and other duties with respect to the quality of the materials delivered shall conclusively be presumed to have been satisfied, all liability therefore terminates and no action for breach of any such duties may thereafter be commenced. W. R. Meadows of Canada shall in no event be liable for consequential damages. Unless otherwise agreed to in writing, no warranty is made with respect to materials not manufactured by W. R. Meadows of Canada. We cannot warrant or in any way guarantee any particular method of use or application or the performance of materials under any particular condition. Neither this Warranty nor our liability may be extended or amended by our salesmen, distributors or representatives, or by our distributor's representatives, or by any sales information or drawings.

Do not over mix. Over mixing or moving the mixer up and down during mixing process will cause air entrapment, which will shorten the pot life and heal time and will result in tool marks and pinholes appearing in the final finish.

FLOOR-TOP STG may be mixed through a continuous rotor-stator type mixer and pump combination for larger areas. To achieve a more efficient and problem free application, W. R. MEADOWS recommends the Machine Technologies D-25 Continuous Mixer.

**Placement ...** Application depth is minimum 9.52 mm (3/8") when left unprotected to foot and light rubber-wheeled traffic, 6.35 mm (1/4") minimum for coated, and 3.17 mm (1/8") minimum for floor coverings such as resilient floor coverings.

Do not apply when the interior ambient, substrate or product temperature is below 18.3° C (65° F). In applications over 93 m<sup>2</sup> (1000 ft.<sup>2</sup>), use an appropriate continuous mixer style pump such as the Machine Technologies D25/P25 mixer and pump combination system. Ensure all doors and windows are closed to prevent drafts. Do not blow forced air directly onto curing product for seven days. Do not apply if the relative humidity is below 35%. If the relative humidity is below 35%, use an external humidifier to achieve proper relative humidity. Extremely low relative humidity will lead to rapid water loss and potential cracking. For temperatures above 29° C (85° F), follow American Concrete Institute (ACI) hot weather application guidelines.

Pour or pump properly mixed FLOOR-TOP STG onto properly prepared and primed surface in a ribbon pattern. Maintain a wet edge at all times. If a wet edge cannot be maintained, reduce the width of the pour. A 6 m (20') width of application is a reasonable width to help ensure that the proper wet edge is maintained. The use of the Machine Technologies D25/P25 mixer and pump combination system or similar will increase the application width thereby decreasing labour cost. Always pour or pump slightly behind the wet edge, thereby keeping the wet edge moving forward from one side of the area to the other side. Pour slowly into wet edge; do not throw product into wet edge which will result in splattering and waviness.

Immediately after placement, spread the material with a gauge rake set to desired depth and smooth with a smoothing tool, such as a Magic Trowel from TexMaster Tools. FLOOR-TOP STG cannot be bonded to itself without the aid of the epoxy-sand-broadcast method. Before starting the application, be prepared, have everything ready, and have all the necessary tools and additional product in place. Once the application begins, you will not be able to stop for any period of time. A delay in the continuous application will result in a cold joint and ridges.

**Surface Enhancement ...** FLOOR-TOP STG may be acid stained and/or dyed with an acetone concrete dye or water-based stain. Consider lightly sanding the surface with an 80-140 grit wire mesh sanding pad and orbital sander prior to application of an acid stain or dye to achieve a more uniform appearance.

FLOOR-TOP STG may be integrally pigmented with an inorganic pigment such as Buddy Rhodes Ultra Fine Pigment. Concrete artisans are available that are experts in applying colour enhancements for a superior finish.

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Colour variations from mix to mix due to water addition, depth, and actual amount of pigment added per mix is normal and, therefore, a surface treatment may be considered to bring uniformity to the flooring system. Integral pigments will increase colour life over acid-stained systems, especially in high traffic areas where the surface treatment may wear, thereby exposing the light grey FLOOR-TOP STG that had not been pigmented to the same colour family as the surface treatment.

Always seal after acid staining, dying, or any other colourant with two coats of DECRA-SEAL W/B. FLOOR-TOP STG may be coated with standard systems suitable for concrete, such as epoxy, polyurea, vinyl ester seamless resistant floor coverings, vinyl composite tile, carpeting, linoleum, hard tiles, concrete paints, and wood floors or similar. Flooring adhesives compatible with concrete may be used with FLOOR-TOP STG.

Final appearance is the sole responsibility of the applicator as W. R. MEADOWS does not provide colour enhancement products or control colour enhancement application techniques.

#### PRECAUTIONS

Avoid inhalation of dust. Avoid direct contact with this product. Utilize gloves and safety glasses to minimize direct contact. If contact occurs, wash affected areas with mild soap and water. Keep product out of reach of children. For industrial use only. Refer to Material Safety Data Sheet for complete health and safety information.

#### LEED INFORMATION

May help contribute to LEED credits:

- IEQ Credit 4.3: Low-Emitting Materials - Flooring
- MR Credit 2: Construction Waste Management
- MR Credit 4: Recycled Content
- MR Credit 5: Regional Materials

#### MASTERFORMAT NUMBER AND TITLE

03 54 13 – Gypsum Cement Underlayment

For most recent data sheet, further LEED information, and MSDS, visit [www.wrmeadows.com](http://www.wrmeadows.com).

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