

MasterTop[®] TC 683 Series

Aliphatic polyaspartic flooring top coat
Fast Setting (FS) & Low Odor (LO) options

PACKAGING

PART A CLEAR:

- 5 gallon (18.93 L) pails
- 1 gallon (3.79 L) pails

PART A TINT BASE:

- 3.75 gallon (14.20 L) short filled pails
- 0.75 gallon (2.84 L) short filled pails

PIGMENT PACKS:

- 1.25 gallon (4.73 L) pails
- 1 quart (0.95 L) pails

PART B:

- 5 gallon (18.93 L) pails
- 1 gallon (3.79 L) pails

COLOR

Available in clear and a wide range of standard colors (see Master Builders Solutions Performance Flooring Color Portfolio for list of colors)

YIELD

Topcoat: 250–375 ft²/gallon
Coverage rates are approximate and will vary with the desired texture of the floor and the porosity of the substrate.

STORAGE

Keep stored in cool, dry environments and out of direct sunlight in unopened containers. Protect from freezing.

SHELF LIFE

1 year when properly stored

VOC CONTENT

Less than 100 g/L when mixed and applied per Master Builders Solutions instructions

DESCRIPTION

MasterTop TC 683 FS and MasterTop TC 683 LO are two component, aliphatic polyaspartic coatings. Both clear and pigmentable options are available. They provide excellent abrasion resistance, chemical resistance, weather resistance, and color retention when used as a top coat with recommended Master Builders Solutions Performance Flooring systems.

PRODUCT HIGHLIGHTS

- Cures very quickly to reduce facility downtime
- Excellent UV resistance helps retain color over time
- Resistant to a wide range of chemicals for use in many harsh environments
- Can be applied at temperatures as low as -30° F for use in cold temperature applications
- Low VOC for use in all North American regions

APPLICATIONS

- Interior or exterior
- Floors exposed to heavy traffic, harsh chemicals, and temperature changes
- Where color and UV Stability are necessary
- As a lock coat and top coat for recommended Master Builders Solutions Performance Flooring systems
- Industrial floors
- Aircraft hangars

SUBSTRATES

- Over new and existing concrete surfaces and toppings

HOW TO APPLY

SURFACE PREPARATION

1. Floors must be structurally sound and fully cured a minimum of 28 days. Test floor for vapor drive in accordance with ASTM D 4263, ASTM F 2170 or ASTM F 2420. If vapor drive exceeds the levels recommended by the manufacturer of the flooring system, a moisture mitigation system such as MasterTop VB 240 FS may be applied to reduce the permeance of moisture vapor to acceptable levels.
2. Repair concrete as necessary.
3. Use a commercial degreaser to clean floors of oil, grease, and other bond inhibiting materials.
4. Remove curing and parting compounds and other surface hardeners and floor coatings in accordance with the manufacturer's instructions.
5. Mechanical surface profiling is the recommended method of surface preparation for both new and existing floors. Mechanically profile the floor to CSP 3 (approximately medium grit sandpaper) as described by the International Concrete Repair Institute (Guideline #310.2). Do not use acid etching for surface preparation. Do not use any method that will fracture the concrete.
6. Apply a 25 ft² (2.32 m²) test in an inconspicuous area that meets owner's expectation for appearance, slip resistance and performance.

Technical Data

Composition

MasterTop TC 683 is a two component aliphatic polyaspartic polymer

Test Data

PROPERTY	RESULTS	TEST METHOD
Adhesion, psi	> 400	ASTM D 4541
Coefficient of friction		ASTM D 2047
Dry	0.98	
Wet	0.83	
Hardness	94	ASTM D 2240
Taber Abrasion, mg loss	22–28	ASTM D 4060
Tensile Strength, psi	4,500–5,000	ASTM D 968

Chemical Resistance: Full chemical resistance is achieved after curing for 7 days. For resistance to a specific chemical compound, consult the Master Builders Solutions Chemical Resistance Guideline.

7. This coating must be installed over UCRETE, Selby or other systems within the prescribed recoat window to promote maximum intercoat adhesion. MasterTop TC 683 FS is recommended for applications requiring a smooth, non textured finish. If the recoat window is exceeded, the surface must be mechanically abraded and properly cleaned to create a mechanical bond between the surface and the MasterTop TC 683 application.

MIXING

1. Properly mix each component separately before mixing together to ensure uniform consistency.
2. For a pigmented coating, add full contents of the tint pack directly into the short filled Part A tint base. Scrape the sides of the containers to ensure all contents of the pigment pack have been used. Mix for 2 minutes using a slow speed drill and Jiffy-style mixing paddle at 350 rpm to ensure pigment is fully dispersed.
3. Mix the components for this product in the following ratios:

COATING	COMPONENTS	MIX RATIO
Clear	Part A Clear / Part B	1:1 (A:B) by volume & unit
Pigmented	Part A Tintbase / Pigment Pack / Part B	1:1 (A+Pigment:B) by volume & unit

4. Mix components together properly for 2–3 minutes with a slow speed drill and Jiffy-style mixing paddle at 350 rpm. Keep the paddle below the surface to avoid entrapping air. Do not mix when relative humidity levels are below the dew point, as this will shorten the pot life significantly.
5. Do not introduce alcohol or solvents into the material at any point during application.

APPLICATION

1. Apply MasterTop TC 683 at a rate of 250–375 ft²/gallon using a 1/8" to 3/8" nap roller or squeegee. Coverage rates will range depending upon the surface profile and texture of substrate.
2. Back roll and cross roll the material to ensure application uniformity.
3. If an additional coat is needed, recoating can begin as soon as 1–2 hours after initial application. Cooler temperatures will extend the time at which the product can be recoated. Apply the second coat at a rate of 250–375 ft²/gallon. The maximum recoat window to apply an additional coat is 48 hours.
4. Allow to cure before putting back into service. Foot traffic is generally acceptable after 2–4 hours under normal conditions. Vehicular traffic is generally acceptable after a minimum of 24 hours under normal conditions (normal conditions assume 70° F and 50% relative humidity).

MAINTENANCE

Regular cleaning and maintenance will prolong the life of all polymer flooring systems, enhance their appearance, and reduce tendency to retain dirt.

FOR BEST PERFORMANCE:

- Both MasterTop TC 683 LO and MasterTop TC 683 FS are recommended for applications over broadcast aggregates. MasterTop TC 683 LO is not recommended for applications requiring a smooth finish.
- Tailor application techniques and coverage rates to job site conditions.
- Do not exceed a recoat window of 48 hours. If in doubt, contact your Master Builders Solutions representative or flooring specialist.
- Precondition this product to 70° F (21° C) for 24 hours before using.
- Use an effective moisture barrier for substrates on or below grade; if not present, contact your Master Builders Solutions representative for options.
- Install this product on a substrate temperature at 50 to 85° F (10 to 30° C).
- The architect and owner should address joint details with the contractor before the job starts.
- Do not expose MasterTop TC 683 to any chemicals until fully cured (approximately 4 days).
- Boxing batches is recommended to ensure color consistency.
- Make certain the most current versions of product data sheet and SDS are being used; Consult the Master Builders Solutions website at www.master-builders-solutions.com/en-us/performanceflooring to verify the most current version.
- Proper application is the responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbscst@mbcc-group.com or calling 1(800)433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

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