



The Chemical Company

Technical Data Guide

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Resinous
Flooring

MasterTop® 1213

High build epoxy flooring system
with an extended wear topcoat

FORMERLY SELBACOAT™ III

YIELD

Primer: 100 – 200 ft²/gallon (2.5 – 5 m²/L)

Base coat: 175 – 200 ft²/gallon
(4.4 – 5 m²/L)

Topcoat: 150 – 300 ft²/gallon
(3.8 – 7.5 m²/L)

All coverage rates are approximate.

Coverage rates will vary with the desired texture and the porosity of the concrete.

PACKAGING

MasterTop GP 500 and MasterTop

TC 504 epoxy coatings:

5 gallon (18.9 L) pails

55 gallon (208 L) drums

MasterTop TC 493 polyurethane top coat:

5 gallon (18.9 L) pails

MasterTop TC 683 polyaspartic top coat:

1 gallon (3.79 L) cans

5 gallon (18.9 L) pails

COLOR

Available in 7 standard colors. Refer to the BASF Performance Flooring Color Guide for more information.

SHELF LIFE

MasterTop Epoxy coatings: 2 years when properly stored.

MasterTop TC 493 Polyurethane topcoat: 1 year when properly stored.

MasterTop TC 683 Polyaspartic topcoat: 1 year when properly stored.

STORAGE

Store and transport in unopened containers in a clean, dry area. Protect from freezing.

VOC CONTENT

See MasterTop 1213 LEED Letter

DESCRIPTION

MasterTop 1213 is a flooring system consisting of a high solids epoxy base coat with an abrasion resistant polyurethane or polyaspartic finish. MasterTop 1213 is squeegee or roller applied to a thickness of 20 mils or greater. The MasterTop 1213 pigmented topcoat can have a slip resistant or smooth surface.

PRODUCT HIGHLIGHTS

- Polyurethane or polyaspartic topcoat for excellent abrasion resistance
- High solids for excellent resiliency and flexibility
- Resistant to a wide range of automotive and hydraulic fluids
- UV stabilizers for excellent color retention
- Textured finish options enable texture to be customized to meet the needs of each facility
- Wide in-service range for use in hot or cold environments

APPLICATIONS

- Areas subject to rubber-wheeled vehicles and heavy foot traffic
- Where a high level of abrasion and chemical resistance is required
- Commercial applications
- Automotive service areas
- Warehouses
- Laboratories
- Clean rooms

LOCATION

- Interior applications

SUBSTRATE

- Over new and existing concrete substrate and toppings

TECHNICAL DATA

COMPOSITION

MasterTop 1213 is a high-solids epoxy system with a finish coat.

TEST DATA

PROPERTY	RESULTS	TEST METHODS
Salt spray , after 1,000 hrs	No effect	ASTM B 117
Accelerated weathering , after 2,000 hrs	No effect	ASTM D 822
Impact resistance , in/lb (kg/m)	140 (1.62)	ASTM D 2794
Impact resistance	No chipping, cracking or delamination	MIL-D-3134
Moisture vapor transmission , perms	0.01	MIL-D-3134
Fire resistance	Fire retardant	ASTM E 96
Abrasion resistance , g loss C-17 wheel, 1,000 cycles, 1,000 g load	0.031	ASTM D 4060
Adhesive strength , psi (MPa)	350 (2.5) (100% concrete failure)	ASTM D 4541
Surface flammability , Flame spread index Smoke deposit, mg/ms NBS Class	9.29 0.1 1	ASTM E 162
Coefficient of friction , Dry Wet	0.74 0.73 Meets slip resistant criteria	ASTM D 2047
Rate of burning	Self extinguishing over concrete	ASTM D 635
Oil absorption	Nil	MIL-D-3134
Operational service temperature range	20 to 200° F (-7 to 93° C)	
Water absorption	Nil	MIL-D-3134
Hardness , Shore D	75 – 85	ASTM D 2240
Heat resistance , at 158° F (70° C) for 5 hours	No flow, slip or softening	MIL-D-3134

Unless otherwise noted, test samples were cured 7 days at 73° F (23° C).

CHEMICAL RESISTANCE

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

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, ASTM F 2170 or ASTM F 2420.
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 method of surface preparation for both new and existing floors. Mechanically profile the floor to CSP 3 (approximating medium-grit sandpaper) as described by the International Concrete Repair Institute. Do not use acid etching for surface preparation. Do not use any method that will fracture the concrete.
6. Apply a 25 ft² (2.35 m²) test in an inconspicuous area that meets the owner's expectations for appearance, slip resistance and performance.

MIXING

1. Properly mix the components for this product in the following ratios:

TYPICAL PROPERTIES

APPLICATION COMPONENTS	MIX RATIO BY VOLUME
Primer MasterTop GP 500 Part A / Part B / Silica flour	2 to 1
Base Coat MasterTop TC 504 Part A / Part B	2 to 1
Topcoat MasterTop TC 683 Part A / Part B MasterTop TC 493 Part A / Part B	1 to 1 3 to 1

2. Properly mix each component separately before mixing together to ensure uniform consistency.
3. Combine Parts A and B in a suitably sized container. Use the proper ratios of A and B; scrape the sides of the containers to ensure a complete reaction.

4. Mix properly for 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 by hand.

APPLICATION

1. Add the silica flour to the mixed Part A and B primer and mix thoroughly. Apply the primer at 50 – 200 ft²/gallon (1.25 – 5 m²/L). Allow to cure.
2. Apply the mixed base coat at 175 – 200 ft²/gallon (4.4 – 5 m²/L).
3. If a slip-resistant surface is desired, broadcast quartz aggregate into the wet base coat to the point of rejection. Allow to cure. Sweep stone and vacuum the excess aggregate.
4. Apply the mixed topcoat at approximately 300 ft²/gallon (4 – 6.5 m²/L).
Note: Various curing agents can be used to achieve desired application properties; refer to the MasterTop GP 500 and MasterTop TC 504 product data sheets for more information.

DRYING TIME

Primer: 12 – 24 hours
Base coat: 12 – 24 hours
Topcoat: 12 – 24 hours
Drying times assume 70° F (21° C) and 50% relative humidity.

MAINTENANCE

Regular cleaning and maintenance will prolong the life of all polymer flooring systems, enhance their appearance and reduce any tendency to retain dirt. Refer to the MasterTop cleaning and maintenance guide for more information.

FOR BEST PERFORMANCE

- Precondition this product to 70° F (21° C) for 24 hours before using.
- Do not exceed the recommended recoat window of 24 hours; if in doubt, contact your BASF flooring specialist.
- Rapid temperature cycling can lead to premature failure of the product.
- Tailor application techniques and coverage rates to meet jobsite conditions.

- Use an effective moisture barrier for substrates on or below grade. If not present, contact your BASF representative for options.
- Substrates must be structurally sound, clean, dry and free of any foreign matter that could inhibit adhesion.
- Install this product at a substrate temperature between 50 and 85° F (10 and 30° C).
- Do not expose MasterTop 1213 to any chemicals until fully cured (7 days).
- The maximum in-service temperature of MasterTop 1213 is 170° F (73° C).
- BASF representatives or flooring specialists are available to assist you in the selection of the proper flooring system. Call 1-800-243-6739 for in-house and field technical assistance.
- Make certain the most current versions of product data sheet and SDS are being used; visit www.master-builders-solutions.basf.us to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF 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

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.basf.us, e-mailing your request to basfbscst@basf.com or calling 1(800)433-9517. Use only as directed. **For medical emergencies only, call ChemTrec 1(800)424-9300.**

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BASF Corporation
Constructions Systems

889 Valley Park Drive, Shakopee, MN 55379
www.master-builders-solutions.basf.us

Customer Service 1(800)433.9517
Technical Service 1(800)243.6739

