



The Chemical Company

Technical Data Guide

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Resinous
Flooring

MasterTop® 1249 CLAD

Trowel applied decorative epoxy flooring system

FORMERLY SELBACLAD® 415

YIELD

Primer: 200 ft²/gallon (6.25 m²/L)
Base coat: 50 ft²/batch (4.5 m²/L)
Grout coat: 165 ft²/gal (4.1 m²/L)
Topcoat: 250 ft²/gallon (6.25 m²/L)
Coverage rates assume a 1/4" (6 mm) total system thickness. All rates are approximate and will vary with the desired texture and the porosity of the concrete.

PACKAGING

1 gallon (3.79 L) cans
5 gallon (18.95 L) pails
55 gallon (208 L) drums
Aggregate: 50 lb bags (22.7 kg)
Pigments: 1 Pint Can (0.47 L)

COLOR

Base coat: 7 standard colors; see the BASF Performance Flooring Color Guide for details
Topcoat: clear only
Custom colors are subject to minimum quantities, increased manufacturing lead-times.

SHELF LIFE

MasterTop Epoxy coatings: 2 years when properly stored.
Polyurethane topcoat: 1 year when properly stored
Polyaspartic top coat: 1 year when properly stored

STORAGE

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

VOC CONTENT

See MasterTop 1249 CLAD LEED Letter

DESCRIPTION

MasterTop 1249 CLAD is a 1/4" (6 mm) polymeric flooring system composed of 100% solids, tinted, epoxy resin components and specially graded aggregates. It is a trowel applied, tinted clad layer with a clear finish coat. This flooring system yields heavy duty performance similar to MasterTop 1245 CLAD with a decorative, natural aggregate look.

PRODUCT HIGHLIGHTS

- Specially graded aggregates are formulated for heavy-duty use
- Clear topcoat provides decorative aggregate final appearance
- Temperature service range of 0 to 170° F (-18 to 76° C) is ideal for a wide range of environments
- Good abrasion, chemical, and impact resistance for long lasting protection
- 100% solids formulation that is low in odor and VOC compliant in all regions
- Can be used with MasterTop TC 493 or MasterTop TC 683 topcoats for increased abrasion and chemical resistance

APPLICATIONS

- Where a high level of impact and chemical resistance is required
- MasterTop 1249 CLAD withstands forklift and heavy foot traffic as well as impacts
- Correctional facilities
- Cafeterias, food-preparation and service areas
- Laboratories
- Aisles
- Clean rooms

LOCATION

- Interior only

SUBSTRATE

- Over new and existing concrete floors and toppings; for other substrates, contact Technical Service

TECHNICAL DATA

COMPOSITION

MasterTop 1249 CLAD is an epoxy resin system with specially-graded aggregates.

TYPICAL PROPERTIES

PROPERTY	VALUE
Weight , lbs/ft ² (kg/m ²), at 1/4" (6 mm) thickness	2.4 (11.7)

TEST DATA

PROPERTY	RESULTS	TEST METHODS
Compressive strength , psi (MPa)	13,100 (92)	ASTM C 579
Tensile strength , psi (MPa)	8,000 (56)	ASTM D 638
Flexural strength , psi (MPa)	4,990 (34)	ASTM D 790
Surface flammability		
Flame spread index	9.29	ASTM E 162
Smoke deposit, mg/ms	0.1	
NBS Class	1	
Rate of burning	Self-extinguishing	ASTM D 635
Abrasion resistance , mg loss; C-1 Wheel, 1,000 g load, 1,000 cycles	0.070	ASTM D 4060
Hardness , Shore D	75 – 85	ASTM D 2240
Indentation, inches		
Initial	0.007 (0.6%)	MIL-D-3134
24 hr residual	0.0 (0%)	
Impact resistance	No chipping, cracking, or delaminating	MIL-D-3134
Fire resistance	Fire retardant	MIL-D-3134
Adhesive strength , psi (MPa)	350 (2.5) 100% concrete failure	ASTM D 4541
Slip-resistant properties	Minimum 0.8 Exceeds ADA requirements	MIL-D-3134
Oil absorption	Nil	MIL-D-3134
Water absorption	Nil	MIL-D-3134
Heat resistance , at 158° F 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

In accordance with ASTM D 1308, MasterTop 1249 CLAD with the standard epoxy finishing coat will resist spills and exposures for up to 7 days at 72° F (22° C) for the following chemicals.

- Dilute mineral acids, including hydrochloric (< 30%), phosphoric (< 20%), and sulfuric (< 50%)
- Alkalis, including potassium hydroxide to 50% concentration
- Some dilute organic acids, such as acetic (30%), formic, citric, and uric
- Fats, oils, and sugars
- Mineral oils, diesel fuel, kerosene, and gasoline
- Some organic solvents, including aliphatic hydrocarbons

Full chemical resistance is achieved after curing for 7 days. For resistance to a specific chemical compound, consult the BASF Performance Flooring Chemical Resistance Guide.

HOW TO APPLY

SURFACE PREPARATION

1. Concrete 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.
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 penetration for both new and existing floors. Mechanically profile the floor to a minimum CSP 4 as described by the International Concrete Repair Institute.
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. 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	2 to 1
Base Coat MasterTop GP 500 Part A / Part B + MasterTop PGM 500 pigment pack + MasterTop F500TG aggregate	2 to 1 *Aggregate **Pigment
Grout coat MasterTop GP 500 Part A / Part B	2 to 1
Topcoat MasterTop GP 500 Part A / Part B	2 to 1

*Add 2 bags of aggregate for every 1-1/2 gallons of mixed resin.
 **Add 1 pigment pack every 3 mixed gallons of MasterTop GP 500.
 (Note: Some colors will require 2 pigment packs for every 3 mixed gallons. Consult the BASF Performance Flooring color chart for more information.)

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 rpms. Keep the paddle below the surface to avoid entrapping air. Do not mix by hand.

PRIMING

Apply the mixed primer to the properly prepared concrete at 200 ft²/gallon (5 m²/L). The base coat can be applied over the wet primer coat.

APPLICATION

BASE COAT – HAND TROWELING

Add 100 lbs of MasterTop F 500TG aggregate to each 1-1/2 gallon batch of mixed Part A and B. Apply at approximately 50 ft²/batch (4.5 m²/L) to a 1/4" (6 mm) nominal thickness or to the specified depth. Allow to cure 12 – 24 hours.

GROUT COAT

Use a squeegee or trowel to install the clear grout coat at 50 – 200 ft²/gallon (1.25 – 5 m²/L). The grout coat must completely seal the porous base coat. Allow to cure 12 – 24 hours.

FINISH COAT

1. Apply the clear topcoat at 250 ft²/gallon (6.25 m²/L). Spread the coating by squeegee or trowel and back roll. The total thickness should be a minimum of 1/4" (6 mm), depending on the specification.
2. Allow 24 hours to cure. Do not expose the finished floor to chemicals until fully cured, a minimum of 7 days.
3. Substitute a finish coat of MasterTop TC 493 or MasterTop TC 683 if additional abrasion, chemical or UV resistance is needed.
 Note: Various curing agents can be used to achieve desired application properties; refer to the MasterTop GP 500 product data guide for more information.

DRYING TIME

Primer: 12 – 24 hours (base coat can be applied wet on wet)
 Base coat: 12 – 24 hours
 Grout coat: 12 – 24 hours
 Topcoat: 24 hours
 Recoat window: 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

- Do not exceed the recommended recoat window of 24 hours; if in doubt, contact your flooring specialist.
- Boxing batches is recommended to ensure color consistency.
- Precondition this product to 70° F (21° C) for 24 hours before using.
- Do not expose the MasterTop 1249 CLAD flooring system to any chemicals until fully cured (7 days).
- Use an effective moisture vapor barrier for substrates on or below grade; if not present, contact your BASF Flooring Representative for options.
- Install these products at a substrate temperature between 50 and 85° F (10 and 30° C).
- For resistance to chemicals, consult the Chemical Resistance Guide.
- The maximum service temperature is 170° F (76° C).
- Rapid temperature cycling can lead to premature failure of this product.
- As an alternative to the topcoat, apply MasterTop TC 493 polyurethane or MasterTop TC 683 polyaspartic polyurethane for increased abrasion resistance, color retention, and UV stability.

- Before the job starts, the architect and owner should address joint details with the flooring contractor.
- BASF representatives and flooring specialists are available to assist you in the selection of the proper coating system. Call 1-888-243-6739 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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