



The Chemical Company

Technical Data Guide



09 96 35
Chemical Resistant
Flooring

MasterTop® 1247CR

Trowel applied pure Novolac epoxy system

FORMERLY SELBACHEM® 6751

YIELD

Primer: 200 ft²/gallon (5 m²/L)

Base coat: 48 ft² (4.4 m²)/batch

Grout coat: 80 – 100 ft²/gal (2 – 2.5 m²/L)

Topcoat: 80 – 100 ft²/gal (2 – 2.5 m²/L)

Coverage rates assume a total system thickness of 1/4" (6 mm). 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

Aggregate sold in 55 lb. bags

COLOR

Clear and 7 standard colors.

Custom colors are available on request.

Custom colors are subject to minimum quantities, increased manufacturing lead-times, and premium pricing. Refer to the BASF Performance Flooring Color Guide for more information.

SHELF LIFE

MasterTop Epoxy coatings: 2 years when properly stored.

STORAGE

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

VOC CONTENT

See MasterTop 1247CR LEED Letter

DESCRIPTION

MasterTop 1247CR is a 100% solids non-reinforced topping with resistance to 98% sulfuric acid. It consists of pure Novolac resins and aggregate blends used to create a surfacing base with pigmented Novolac topcoats. It is applied over properly primed surfaces at a depth of 1/4" (6 mm).

PRODUCT HIGHLIGHTS

- Highest level of chemical resistance to provide protection in the harshest industrial environments
- 100% solids epoxy formulation is VOC compliant in all regions and low in odor
- Hard surface is easy to clean and maintain
- Available in a variety of textures customized to meet each facility's needs
- May function as a floor resurfacer to fill and level damaged concrete
- 1/4" (6 mm) troweled base provides increased abrasion and impact resistance

APPLICATIONS

- Heavy-duty traffic areas
- Where harsh chemicals are used or stored
- Industrial plants
- Petrochemical facilities
- Battery manufacturing and storage areas
- Pulp and paper industries
- Food processing plants
- Waste areas
- Kitchens
- Electroplating operations
- Acid-etching environments

LOCATION

- Interior floors

SUBSTRATE

- New and existing concrete surfaces and toppings

TECHNICAL DATA

COMPOSITION

MasterTop 1247CR is a 100% solids pure Novolac epoxy.

TYPICAL PROPERTIES

PROPERTY	VALUE
Tack-free time , hrs	4 – 6

TEST DATA

PROPERTY	RESULTS	TEST METHODS
Mixed Viscosity , cps	4,500	ASTM D 2393
Pot life , minutes	40	ASTM D 2471
Bond strength , psi (MPa)	2,600 (18) 100% concrete failure	ASTM C 882
Compressive strength , psi (MPa)	14,300 (99.3)	ASTM D 695
Tensile strength , psi (MPa)	5,700 (39.58)	ASTM D 638
Tensile elongation , %	3.7 ±0.3	ASTM D 638
Hardness , Shore D	80 ±2	ASTM D 2240

Unless otherwise noted, test samples were cured for 28 days at 73° F (23° C).

CHEMICAL RESISTANCE

CHEMICAL	RESISTANCE
Sulfuric Acid , 98%	Excellent
MEK	Very good
Acetic Acid , 20%	Very good

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

- 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.
- Repair concrete as necessary.
- Use a commercial degreaser to clean floors of oil, grease, and other bond-inhibiting materials.
- Remove curing and parting compounds and other surface hardeners and floor coatings in accordance with the manufacturer's instructions.
- Mechanical surface profiling is the method of surface preparation for both new and existing floors. Mechanically profile the floor to CSP 4 (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.
- 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

- Mix the components for this product in the following ratios to ensure uniform consistency.

TYPICAL PROPERTIES

APPLICATION COMPONENTS	MIX RATIO BY VOLUME
Primer MasterTop GP 500 Part A / Part B	2 to 1
Base Coat MasterTop TC 570CR Part A / Part B EMR Aggregate	2 to 1
Grout coat MasterTop TC 570CR Part A / Part B	2 to 1
Topcoat MasterTop TC 570CR Part A / Part B	2 to 1

*Use 2 bags of aggregate for every 1-1/2 gallon of mixed resin.

- Properly mix each component separately before mixing together to ensure uniform consistency.
- 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.

- 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.
- Mix in the aggregate according to instructions in the Application section.

PRIMING

Prime the properly prepared concrete with MasterTop GP 500 epoxy. Apply the primer at 200 ft²/gal (5 m²/L). The recoat window is 12 – 24 hours at 73° F (23° C) and 50% relative humidity.

APPLICATION

BASE COAT

- Mix MasterTop TC 570CR part A and B for the base coat. Slowly add 100 lbs of MasterTop F 500TG aggregate for each 1-1/2 gallons of mixed resin. Mix thoroughly.
- On properly prepared and primed concrete, screed and trowel the mix to a 1/4" thickness.

GROUT COAT

- Apply the properly mixed MasterTop TC 570CR onto the base coat by squeegee or trowel. Apply at an approximate coverage rate of 80 – 100 ft²/gallon (2 – 2.5 m²/L). The grout coat must fill any voids remaining in the base coat.
- Broadcast aggregate, if desired, into the wet grout coat for a slip-resistant finish. Allow to cure. Sweep, stone, and vacuum the excess.

TOPCOAT

- Apply the properly mixed MasterTop TC 570CR onto the grout coat by squeegee or trowel. Apply at an approximate coverage rate of 80 – 100 ft²/gallon (2 – 2.5 m²/L). Spread the material out and allow it to level. Be careful when backrolling the material it may cause a frothing or whitening of the surface.
- For textured surfaces, apply the material at a rate that will achieve the desired finish.

DRYING TIME

Tack free: 4 – 6 hours

Accepts light traffic: 24 hours

Fully cured for chemical resistance: 7 days

Recoat window: 12 – 24 hours

Cure times are based on 73° F (23° C) and 50% relative humidity. Lower temperatures will extend the cure times significantly.

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.
- Use an effective moisture barrier for substrates on or below grade; if not present, call your local BASF representative for options.
- Excessive back rolling may cause frothing or whitening of the surface.
- Do not use for primary containment or constant water immersion.
- Install these products at a substrate temperature of 50 to 85° F (10 to 30° C).
- After priming and before each additional coat, examine the surface for an amine blush (an oily film that all epoxies may exhibit). If present, the blush must be removed before application of subsequent coats.
- BASF representatives and flooring specialists can help you select the proper flooring system. Call 1-800-433-6739 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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