



The Chemical Company

PRODUCT DATA

9 09 67 23 Resinous Flooring

SELBACLAD 425

1/4" trowel-applied decorative epoxy flooring system

Description

Selbaclad 425 is a polymeric flooring system composed of high-solids epoxy resins and specially graded aggregates. It is a trowel-applied pigmented clad layer with a pigmented finish coat.

Yield

Primer: 250 ft²/gallon

Base coat: 48 ft²/batch

Grout coat: 165 ft²/gallon

Finish coat: 250 ft²/gallon

All coverage rates are approximate.

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

Packaging

Resin:

1 gallon (3.79 L) cans

5 gallon (18.95 L) pails

55 gallon (208 L) drums available by special order

Aggregate: packaged in bags

Color

Available in 12 standard colors

Custom colors are subject to minimum quantities, increased manufacturing lead-times, and premium pricing. Contact Selby™ for further information.

Shelf Life

2 years when properly stored.

Storage

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

Features

- Good abrasion and impact resistance
- Can be applied with orange-peel finish (see Selby™ OP product data sheet)
- Uniform color appearance
- Temperature service range of 0 to 170° F (-18 to 76° C)
- Compatible
- High solids
- Can be used with N300CR

Benefits

- Formulated for heavy-duty use
- Provides a uniform appearance
- Creates an attractive floor finish
- Suitable for both cold and hot environments
- Can be used in conjunction with Selby™ membranes
- Low odor; VOC compliant
- Superior chemical resistance

Where to Use

APPLICATION

- Areas subject to forklift and heavy foot traffic, impact pressures and chemical exposure
- Chemical processing areas
- Refineries
- Correctional facilities
- Heavy-duty manufacturing facilities
- Food-packaging areas
- Laboratories
- Clean rooms

LOCATION

- Interior

SUBSTRATE

- Over new and existing concrete floors and toppings

How to Apply

Selby™ systems are installed by approved contracting firms. Selby™ is a globally branded product line with industry synergies around the world.

The following is only a summary of the installation techniques used by Selby™ approved contractors.

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.
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.



Technical Data

Composition

Selbaclad 425 is composed of high-solids epoxy resins and specially graded aggregates.

Typical Properties

PROPERTY	VALUE
Weight, lbs/ft ² (kg/m ²), at a 1/4" (6 mm) thickness	2.4 (5.86)

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		ASTM E 162
Flame spread index	9.29	
Smoke deposit, mg/ms	0.1	
NBS Class	1	
Rate of burning	Self-extinguishing	ASTM D 635
Abrasion resistance , mg loss; CS-17 Wheel, 1,000 g load, 1,000 cycles	0.070	ASTM D 4060
Hardness , Shore D	75 – 85	ASTM D 2240
Indentation , inches		MIL-D-3134
Initial	0.007 (0.6%)	
24 hr residual	0.0 (0.5)	
Impact resistance	No chipping, cracking, or delaminating	MIL-D-3134
Rate of burning	Self-extinguishing	ASTM D 635
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) and 50% relative humidity.

Test Results are typical values obtained under laboratory conditions. Reasonable variations can be expected.

Chemical Resistance

In accordance with ASTM D 1308, Selbaclad 425 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 up 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 Selby™ Chemical Resistance Guideline.

6. Apply a 5 by 5 ft (1.52 by 1.52 m) 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.

APPLICATION	COMPONENTS	MIX RATIO
Primer	A750 / B 725	2 to 1
Base coat	A755 tinted / B 725 / EMR aggregate*	2 to 1
Grout coat	A455 pigmented / B451	2 to 1
Topcoat	A455 pigmented / B451	2 to 1

* 100 lbs of aggregate to 1-1/2 gallons of mixed resin

2. 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 250 ft²/gallon at 6 – 8 mils. The base coat can be applied over the wet primer coat.

Application

1. Add 100 lbs of EMR aggregate to each 1-1/2 gallon batch of mixed Part A and B. Apply at approximately 48 ft²/batch to a 1/4" (6 mm) nominal thickness or to the specified depth. Allow to cure 12 – 24 hours.
2. Use a squeegee or trowel to install the grout coat at 165 ft²/gallon at 8 – 32 mils. The grout coat must completely seal the porous base coat. Allow to cure 12 – 24 hours.
3. Apply the topcoat at 250 ft²/gallon at 6 – 8 mils. Spread the coating by squeegee or trowel and backroll. The total thickness should be a minimum of 1/4" (6 mm), depending on the specification.
4. Allow 24 hours to cure. Do not expose the finished floor to chemicals until a minimum of 7 days has passed.
5. Substitute a finish coat of N300CR for A455 / B451, if required.

NOTE: Various curing agents can be used to achieve desired application properties; refer to the Selby™ 700 or 400 product data guides.

Drying Time

Primer: 12 – 24 hours

Base coat: 12 – 24 hours

Grout coat: 12 – 24 hours

Topcoat: 24 hours

Maintenance

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

For Best Performance

- Precondition this product to 70° F (21° C) for 24 hours before using.
- Do not expose the finished floor to chemicals until fully cured (7 days).
- Use an effective moisture-vapor barrier for substrates on or below grade; if not present, contact your BASF representative flooring specialist for options.
- Install these products at a substrate temperature between 50 and 85° F (10 and 30° C).
- The maximum service temperature is 79° C (175° F).
- As an alternative to the finish coat, apply N300CR polyurethane for increased abrasion resistance, color retention and UV stability.
- Rapid temperature cycling can lead to premature failure of the product.
- 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 MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- 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

Read, understand and follow Material Safety Data Sheets and product labels for all components of this flooring system prior to use. The MSDS can be obtained by searching for them on www.BuildingSystems.BASF.com, e-mailing your request to basfbcst@basf.com or calling 800/433-9517. Use only as directed.

BASF Corporation
Building Systems

889 Valley Park Drive
Shakopee, MN, 55379

www.BuildingSystems.BASF.com

Customer Service 800-433-9517
Technical Service 800-243-6739



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