HIGH PERFORMANCE **FLOORING**

RESUWALL™ HPF

FORMERLY DUR-A-WALL HPF

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Extreme Bond®

Interior-Exterior Bonding Primer

B51W01150 (US) B51WQ1150 (Canada)

CHARACTERISTICS

Extreme Bond® Primer is a high quality, waterborne, urethane modified acrylic primer. Designed for coating hard, slick, glossy surfaces with minimal surface preparation.

Because of the exceptional adhesion of this product, sanding may not be necessary for most clean, paintable surfaces.

Features:
- Promotes adhesion on hard to paint surfaces
- Tightly bonds to slick and glossy surfaces
- Assures uniform appearance of topcoats
- One coat application
- Fast dry
- Universal, will accept Hi-Performance coatings such as epoxies and urethanes
- Assures adhesion of the topcoat to slick, glossy surfaces

For use on these surfaces:
- PVC Piping • Plastics • Glass • Wall Laminates
- Glossy Surfaces • Aluminum • Kitchen Cabinets
- Fiberglass • Varnished Woodwork • Glazed Block • Ceramic Wall Tile • Previously Painted
- Fluoropolymer Coatings

Color:	White
Coverage:	450-500 sq. ft. per gallon @ 3.1 mils wet, 1.0 mils dry

Drying Time, @ 77° F, 50% RH:

Touch:	30 minutes
Recoat: as a primer	1 hour
Recoat: as a stain sealer	4 hours
Recoat: with a Hi-Performance finish	24 hours

Drying and recoat times are temperature, humidity, and film thickness dependent.

Finish:	0-10 units @ 60°

Tinting: May be tinted with no more than 2 oz. of ColorCast Ecotoner® per gallon. Do not exceed 2 ounces per gallon of total colorant. Check color before use. For best topcoat color development, use the recommended "P"-shade primer.

Clear B51W01150

V.O.C.(less exempt solvents):
less than 50 grams per litre; 0.42 lbs. per gallon
As per 40 CFR 59.406

Volume Solids:	32 ±2%
Weight Solids:	48 ±2%
Weight per Gallon:	10.76 lbs
Flash Point:	N.A.
Vehicle Type:	Urethane Modified Acrylic
Shelf Life:	36 months, unopened

COMPLIANCE

As of 10/24/2023, Complies with :

OTC	Yes
OTC Phase II	Yes
S.C.A.Q.M.D.	Yes
CARB	Yes
CARB SCM 2007	Yes
CARB SCM 2020	Yes
Canada	Yes
LEED® v4 & v4.1 Emissions	Yes
LEED® v4 & v4.1 V.O.C.	Yes
EPD-NSF® Certified	Yes
MIR-Manufacturer Inventory	No
MPI®	Yes

APPLICATION

When the air temperature is at 35°F(1.7°C) substrates may be colder; prior to painting, check to be sure the air, surface, and material temperature are above 35°F(1.7°C) and at least 5°F above the dew point. Avoid using if rain or snow is expected within 2-3 hours. Air and surface temperatures must not drop below 35°F(1.7°C) for 48 hours after application.

Do not reduce.

Brush:
Use a nylon-polyester brush.

Roller:
Use a 3/8 inch nap soft woven roller cover.
For specific brushes and rollers, please refer to our Brush and Roller Guide on sherwin-williams.com

Spray - Airless:

Pressure	2000 p.s.i.
Tip	.015-.021 inch

APPLICATION TIPS

When spot priming on some surfaces, a non-uniform appearance of the final coat may result, due to differences in holdout between primed and unprimed areas. To avoid this, prime the entire surface rather than spot priming. See Exterior Use if priming pre-finished metal surfaces.

Must be topcoated within 14 days with oil/alkyd, latex, epoxy, urethane, and lacquer topcoats.

EXTERIOR USE: When priming larger exterior pre-finished metal surfaces where exterior maximum adhesion is needed, use DTM Bonding Primer.

SPECIFICATIONS

1 coat Extreme Bond Primer
2 coats Appropriate topcoat

Recommended Architectural Topcoats:
All Surface Enamels
A-100 Exterior Latex*
Duration® Exterior* & Duration Home® Interior
Emerald® Exterior* & Interior
Emerald® Urethane Trim Enamel
ProMar® Interior Series
SuperPaint® Exterior* & Interior
ProClassic® Interior Enamels

Recommended Industrial Topcoats:
Pro Industrial™ Pre-Cat Epoxy
Pro Industrial™ Pre-Cat Urethane
Pro Industrial™ Waterbased Alkyd Urethane Enamel
Pro Industrial™ Waterbased Catalyzed Epoxy
Acrolon 218
Macropoxy 646

* For a complete primer outside, use Exterior Latex Wood Primer or Exterior Oil-Based Wood Primer.

Extreme Bond®
Interior-Exterior Bonding Primer

SURFACE PREPARATION

WARNING! If you scrape, sand or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. (in US) or contact your local health authority.

Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Scrape and sand peeled or checked paint to a sound surface. Sand glossy surfaces dull. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

Do not use hydrocarbon containing solvents such as mineral spirits. When cleaning the surface use only a waterbased emulsifying detergent.

Testing:
On hard, slick, glossy, or otherwise hard to paint surfaces, after preparing the surface, apply a test area of this primer, allow to dry properly and test for adhesion. Because of the exceptional adhesion of this product, sanding may not be necessary for most clean, paintable surfaces.

Sanding or dulling with an abrasive cleaner is recommended on glossy, extremely hard surfaces for maximum adhesion.

Stains from heavy water, smoke, ink, pencil, grease, etc. should be sealed with the appropriate primer-sealer.

Due to the wide variety of substrates, surface preparation methods, application methods, and environments, one should test the complete system for adhesion, compatibility, and performance prior to full scale application.

Aluminum and Galvanized Steel:
Wash to remove any oil, grease, or other surface contamination. All corrosion must be removed with sandpaper, wire brush, or other abrading methods.

Plastic-Vinyl-PVC-Fiberglass-Formica:
After removing all surface contamination, the surface should be scuff sanded or scrubbed with an abrasive cleaner to dull the surface for best adhesion.

Plastic: Due to the diverse nature of plastic substrates, a coating or coating system must be tested for acceptable adhesion to the substrate prior to use in production. Reground and recycled plastics along with various fire retardants, flowing agents, mold release agents, and foaming/blowing agents will affect coating adhesion. Please consult your Sherwin- Williams Representative for system recommendations.

SURFACE PREPARATION

Ceramic Tile-Glazed Block and Brick-Porcelain:
After removing all surface contamination, the surface should be scuff sanded or scrubbed with an abrasive cleaner to dull the surface for best adhesion.

Tile - Tile, laminate, ceramic and plastic tiles, and similar glossy surfaces, must be free of all oil, grease, and soap residue.

Glass - Apply Extreme Bond directly to glass that has been thoroughly cleaned.

CAUTION: Any opaque coating will block light, which then causes an increase in the surface temperature of the glass. Dark colors will get hotter than light colors. In tightly fitted glass, any increase in the temperature of the glass will cause some expansion of the glass, which may cause it to shatter.

Mildew:
Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised.

Mildew may be removed before painting by washing with a solution of 1 part liquid bleach and 3 parts clean water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach-water solution.

PHYSICAL PROPERTIES

B51W01150

Dry Heat Resistance:

Method:	ASTM 2485
Result:	200°F

CAUTIONS

Protect from freezing.

Non-photochemically reactive.

Do not use this product in areas subject to excessive water, e.g., in showers, around sinks, or on tubs.

Not for use on floors.

For large exterior pre-finished metal surfaces such as siding, use DTM Bonding Primer.

Do not use on large surfaces of exterior wood.

Does not adhere to polypropylene, polyethylene, or thermoplastic polyolefins.

Before using, carefully read **CAUTIONS on label**

CRYSTALLINE SILICA Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (**NIOSH** approved) or leave the area. Adequate ventilation required when sanding or abrading the dried film. If adequate ventilation cannot be provided wear an approved particulate respirator (**NIOSH** approved). Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. **FIRST AID:** In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. **DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.** Abrading or sanding of the dry film may release crystalline silica which has been shown to cause lung damage and cancer under long term exposure. **WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **KEEP OUT OF THE REACH OF CHILDREN.**

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CLEANUP INFORMATION

Clean spills, spatters, hands and tools immediately after use with soap and warm clean water. After cleaning, flush spray equipment with compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

SHERWIN WILLIAMS | HIGH PERFORMANCE FLOORING

RESUFLOR™ GARD

PART A	GPDFGRD	SERIES
PART B	GPDFGRDB1	STANDARD HARDENER
PART B	GPDFGRDB2	FAST HARDENER
PART B	GPDFGRDB3	NO SAG HARDENER
PART B	GPDFGRDB4	OPF HARDENER
PART B	GPDFGRDB5	HOPF HARDENER

Revised: April 11, 2025

PRODUCT INFORMATION

PRODUCT DESCRIPTION

RESUFLOR GARD is a pigmented, two component, low odor, 100% solids, thermosetting epoxy designed especially for flooring applications subjected to moderate traffic and chemicals. It is ideally suited for application on concrete. This coating is extremely durable, sanitary and easy to clean.

"SPECIAL PURPOSE" FORMULATIONS

1. **Resuflor Gard with Standard Hardener** has good color stability and a fairly low viscosity so it is easy to apply. However, it is very sensitive to water and moisture during its curing period. The surface must be perfectly dry during application.
2. **Resuflor Gard with Fast Hardener** is a fast curing hardener designed for fast curing intermediate coats.
3. **Resuflor Gard with OPF Hardener** is designed to be used as the first and / or second topcoat to yield a uniform "orange peel" finish.
4. **Resuflor Gard with HOPF Hardener** is designed as a topcoat for DURA-CRETE, and to achieve a heavy orange peel finish.
5. **Resuflor Gard with No Sag Hardener** hardener is used vertical applications.

BENEFITS

- Stain Resistant
- Easy to Clean
- Durable

LIMITATIONS

This product is best suited for application in temperatures between 60°F and 90°F. Substrate must be clean, sound, and dry. Excess of 30 mils may result in bubbles and or pinholes in the coating.

CHEMICAL RESISTANCE

This product is resistant to many common chemicals. Please refer to the master Chemical Resistance Chart on our website for actual resistance to specific chemicals/reagents.

PRODUCT CHARACTERISTICS

Colors:	Various pre-pigmented and custom colors
VOC:	with Standard/Fast/HOPF: <50 g/L with OPF: <100 g/L
Mix Ratio:	2A:1B by volume
Viscosity:	700 cps at 70°F
Pot Life:	20 minutes (std hardener) at 70°F 13 minutes (fast hardener) at 70°F
Cure Time, Touch Dry:	6-8 hours at 70°F
Cured Film Thickness:	16 mils at 100 sq. ft./gallon spread rate
Shelf Life:	12 months, unopened

TYPICAL USES

- Laboratories
- Hospitals
- Pharmaceutical
- Clean Rooms
- Manufacturing
- Warehouses

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000g load, 1000 cycles	35 mg (without urethane topcoat) 4 mg (with Resutile AT gloss)
Bond Strength to Concrete	ASTM D4541	400 psi to substrate fails
Compressive Strength	ASTM D695 ASTM C579	16,000 psi 10,500 psi
Dynamic Coefficient of Friction - Wet*	ANSI A326.3	>0.42
Flammability	ASTM D635	Self Extinguishing
Flame Spread/NFPA 101	ASTM E84	Class A
Flexural Modulus of Elasticity	ASTM D790	5.5×10^5
Flexural Strength	ASTM D790 ASTM C580	4,000 psi 2,900 psi
Hardness (Shore D)	ASTM D2240	70-80
Heat Resistance Limitation	ASTM D2485	140°F-200°F
Impact Resistance	MIL D3134	Pass
Indentation	MIL D3134	.025 MAX
Linear Expansion	ASTM D696	2×10^{-5}
Static Coefficient of Friction*	ANSI B101.1	>0.6
Tensile Elongation	ASTM D638	7.50%
Tensile Strength	ASTM D638 ASTM C307	3,000 psi 1,950 psi
Water Absorption	ASTM D570	0.04%

*Sherwin-Williams flooring systems can be built to meet or exceed the requirements of Static or Dynamic Coefficient of Friction testing per installation. Contact your Sherwin-Williams representative for more information on alternative textures, grit/grip additives, or smooth coatings for your specific environment. A sample should always be obtained and tested prior to purchase for any non-slip flooring system.

SURFACE PREPARATION

Surface must be sound, dry and perfectly clean, free of all oil, grease, detergent film, sealers and/or curing compounds. A surface profile (CSP) of 2-3 is appropriate for most applications. All paint should be removed unless it is a properly applied, totally de-glossed, high quality epoxy. Upper level rooms, like mechanical rooms, bathrooms, or wet process areas that have space below should receive Resuflor EOC seamless fluid applied membrane. No epoxy coatings should be applied unless surface temperature is a minimum of 5 degrees F above dew point.

SHERWIN WILLIAMS | HIGH PERFORMANCE FLOORING

RESUFLOR™ GARD

PART A	GPDFGRD	SERIES
PART B	GPDFGRDB1	STANDARD HARDENER
PART B	GPDFGRDB2	FAST HARDENER
PART B	GPDFGRDB3	NO SAG HARDENER
PART B	GPDFGRDB4	OPF HARDENER
PART B	GPDFGRDB5	HOPF HARDENER

Revised: April 11, 2025

PRODUCT INFORMATION

APPLICATION

Resuflor Gard is applied by “brush, roller and/or squeegee”. When recommended spread rates are followed, a single coat of REGULAR or FAST can yield between 8 and 20 mils DFT. A single coat of OPF can yield between 3 and 5 mils DFT.

NOTE: For each application of material and before mixing, mark your batches to ensure you achieve your spread rate targets. This is best accomplished by dividing your target spread rate by the width of the area being coated (or your planned wet edge). Example: If your spread rate is 100 square feet and your area is 20 feet wide you would make a mark every 5 feet (100 divided by 20 = 5).

MIXING AREA
Select a convenient mix area and protect the surface from spillage by covering with a layer of cardboard and/or sheet of plastic. Be generous with the amount of space you allocate for this function. The more comfortably your mixer works, the less likely you are to have a “mix error”. Make ready all necessary tools, mix and measure containers, etc. DO NOT MIX ANY EPOXY UNTIL READY FOR IMMEDIATE USE. Once hardener and resin are combined, it must be used without delay. Working time is dependent on choice of hardener, size of batch, time to place on floor and temperature of floor and product. Apply masking tape to wherever coating is intended to stop. To obtain neat, straight, chip resistant edges at termination points and/or drains, a “keyed edge” must be installed.

JOINT GUIDELINES
Refer to the Joint Guidelines on our website for complete details.

PRIMING
All surfaces must be primed with Resuprime MVP or Resuprime MVP3 as soon as the surface has been prepared.

QUALITY CONTROL
The color of Resuflor Gard resin may vary slightly from batch to batch. It is recommended that the lot number on the side of the resin pail be checked. If lot numbers are different, box together the different lot numbers to ensure a uniform color for topcoat applications.

Prime surface with appropriate primer and spread rate.

IMPORTANT! Pre-mix Resuflor Gard Hardener for 1 minute and Resuflor Gard Resin for 3 minutes using a 450 RPM drill and 5” Jiffler blade before mixing together.

Measure out 1/2 gallon Resuflor Gard Hardener and 1 gallon Resuflor Gard Resin. When combining, be sure to add the hardener first. Add the resin and scrape out the container. Be careful to pour both hardener and resin into the center of the mixing pail. Mix the blended epoxy with a slow speed power drill with a Jiffler mixing blade for 2-3 minutes. Always scrape the sides and bottom of the mixing bucket to assure thorough blending.

Pour a 4 to 6 inch “ribbon” of blended epoxy onto the floor (typically along the far wall or a joint) at the desired spread rate. Resuflor Gard is typically applied at 100-200 Sq Ft per gallon to yield 8-16 mils DFT per coat with a 1/8-inch or 3/16–inch notched squeegee and then back rolled with a quality non-shed 3/8-inch nap roller.

Cross roll entire area as you go, wearing spiked shoes. Be sure to remove any impurities as you see them. It is much harder to cut or grind them out after the product has cured. Allow to cure.

Non-Skid grit can be broadcast at the rate of 1 lb Per 100-200 Sq Ft if so desired and then back rolled into coating. The size of non-skid aggregate is dependent on the thickness of the Resuflor Gard application. Successive coats can be applied to achieve the desired thickness.

APPLICATION (CONT'D)

TOPCOAT INSTRUCTIONS
Select appropriate Topcoat and follow its application instructions. (Apply pigmented Resutile AT per Product Data Sheet instructions).

For an orange peel finish, apply a coat of Resuflor Gard OPF at a coverage rate of 350-500 Sq Ft per gallon. For an aggressive orange peel texture, apply a coat of Resuflor Gard HOPF at a coverage rate of 100-200 Sq Ft per gallon.

NOTE: If a fast hardener is used, there can be no other performance topcoats over that coating as it will not bond properly.

IMPORTANT: Increasing room temperature to accelerate cure is not recommended, a slight reduction (3°-5°F) from reasonable room temperature may help reduce outgassing. Resuflor Gard is a high gloss finish; special care should be given to avoid surface contamination. USE SIGNS AND BARRIERS to keep traffic out of the area. Do not allow any water on coated surface for 24-48 hours. NOTE: Use HPF Solve or Xylene for clean up.

THICKNESS OF COATING APPLIED (1000 MILS=1 INCH)		COVERAGE PER US GALLON 100% SOLIDS SYSTEM	
	20 MILS	80.0	SQ FT/GAL
1/64 IN. =	16 MILS	102.0	SQ FT/GAL
	10 MILS	160.0	SQ FT/GAL
	8 MILS	200.0	SQ FT/GAL

CLEANUP

This product is considered to be a low maintenance flooring solution; however, certain textures and service environments do require certain procedures.

SAFETY

Refer to the SDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

PART A GPDFHPS — SATIN SERIES
PART A GPDFHPE — EGGSHELL SERIES
PART B GPDFHPB01 — HARDENER

Revised: April 4, 2025

PRODUCT INFORMATION

PRODUCT DESCRIPTION

RESUTILE HPW is a pigmented, two-component, low odor urethane formulation. It is ideally suited for application on concrete, drywall, cement board or block. This coating is extremely durable, chemical resistant, sanitary and easy to clean. Resutile HPW with a matte, eggshell or satin finish will provide protection against very aggressive solvents, acids and alcohols. It features up to 10 times the scrubbing durability of traditional epoxy wall coatings and withstands aggressive cleaning regiments such as Vaporized Hydrogen Peroxide.

BENEFITS

- Stain Resistant
- Easy to Clean
- Seamless
- Chemical Resistant
- Easy
- UV Stable
- Durable
- Sanitary
- Low Odor
- CA 01350 Compliant
- Maintenance
- Scrub Resistant

LIMITATIONS

This product is best suited for application in temperatures between 60°F and 85°F and relative humidity below 75%. Application outside these ranges will impact cure times. Substrate must be clean, sound and dry. Keep from freezing.

CHEMICAL RESISTANCE

This product is resistant to many common chemicals.

PRODUCT CHARACTERISTICS

Colors:	White (can be tinted)
VOC:	<50 g/L
Pot Life, 70°F, 50% RH:	>2 hours
Recoat Time:	60-90 minutes (minimum)
Recoat Window:	Indefinite (sanding recommended)
Return to Service:	16-24 hours
Full Chemical Resistance:	7 days (VHP 14 days)
Coverage Rates (approx. @ 4 mils WFT):	340 SF/kit (satin) 400 SF/kit (eggshell and matte)
Shelf Life:	Part A: 12 months, unopened. Part B: 6 months, unopened.

TYPICAL USES

- Operating Rooms
- Patient Rooms
- Emergency Rooms
- Laboratories
- Pharmaceutical Plants
- Clean Rooms
- Showers

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 mg load, 1000 cycles	Satin: 74 mgs Eggshell: 68 mgs Matte: 84 mgs
Flame Spread/NFPA 101	ASTM E84	Class A
Impact Resistance	ASTM D2794	140 in. lbs.
MEK Rubs		>2,000 no noticeable gloss change or degradation
Pencil Hardness	ASTM D3363	4H Scratch

ORDERING INFORMATION

Resutile HPW is available in 2-component pre-measured kits.

PART A	GPDFHPS	SATIN SERIES
PART A	GPDFHPE	EGGSHELL SERIES
PART B	GPDFHPB01	HARDENER

Revised: April 4, 2025

PRODUCT INFORMATION

SURFACE PREPARATION

This product requires preparation in order to perform as expected. Substrate must be profiled, clean, sound, and dry. Please refer to the Application Instructions for more information.

APPLICATION

Extreme Bond Primer can be applied with a brush or roller at 200-450 SF/gal per, depending on the surface and application method (see Product Data Sheet). Pro Industrial Heavy Duty Block Filler can be applied with a brush or roller at 150-200 SF/gal on masonry block or 200-225 SF/gal on porous concrete. Resutile HPW can be applied with a brush or roller at approximately 400 Sq. Ft. per kit (matte, eggshell) and 340 Sq. Ft. per kit (satin). All coverages will vary depending on porosity and texture of substrate. Refer to the Resutile HPW Application Instructions for complete application information.

CHEMICAL RESISTANCE

Chemical Name	% Conc.	Perf.
Acetic Acid	5%	R
Ammonia, Clear	-	R
Ammonium Hydroxide	3.1%	R
Betadine	-	RS
ChloraPrep	-	RS
CIP 200	-	SS
CIP 300	-	R
Clorox Concentrate	-	R
Ecolab Cleaner	-	R
Ethyl Alcohol	200 proof	R
HPF Solve	-	R
Hydrochloric Acid	20%	R
Hydrogen Peroxide	35%	R
Isopropyl Alcohol	70%	R
Lactic Acid	~30%	SS
Nitric Acid	70%	N
Phosphoric Acid	25%	SS
Spor-Klenz	-	R
Vaporized Hydrogen Peroxide (VHP)	600 ppm	R

Key: **R**= Resistant/Recommended **N**= Not Recommended for exposure to material due to coating degradation
RS= Resistant - will not degrade coating but will stain
S= Splashes and spills must be cleaned from surface within 24 hours to avoid coating and staining
SS= Splashes and spills must be cleaned from surface within 24 hours to avoid coating degradation but it will leave a stain

All data is based on room temperature exposure. Please check with the Sherwin-Williams Technical Department for elevated constant temperature or thermal shock exposure. Methodology - Coatings were spot tested & checked after 1, 2, & 7 days.

CLEANUP

This product is considered to be a low maintenance coating solution. Sherwin-Williams recommends cleaning with a heavy duty alkaline cleaner, however heavy duty cleaners and disinfectants may be used in harsher environments.

SAFETY

Refer to the SDS sheet before use.

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RESUWALL™ HPF

The following information is to be used as a guideline for the installation of the Resuwall HPF wall coating system. Contact the Sherwin-Williams Technical Service Department for assistance prior to application.

APPLICATION INFORMATION — DRYWALL - LEVEL 4 FINISH

VOC MIXED	APPLICATION STEP	MATERIAL	MIX RATIO	THEORETICAL COVERAGE PER COAT	PACKAGING
<50 g/L	Primer	Extreme Bond Primer	Single Component	450-500 sq ft/gal	1 or 5 gal
0 g/L	Body Coat	Resuflor Gard No-Sag	2:1	200-250 sq ft/gal	3 or 15 gal
0	Fiberglass Mat Reinforcement	FM36-2.0			60 yds/roll
0 g/L	Grout	Resuflor Gard No Sag	2:1	80 sq ft/gal	3 or 15 gal/unit
0	Second Grout Coat	Resuflor Gard No Sag	2:1	200 sq ft/gal	3 or 15 gal
0 g/L	Topcoat	Resutile HPS Topcoat	Premeasured Units	400 sq ft/unit Matte or Eggshell 340 sq ft/unit Satin	Premeasured Units
0 g/L	Second Topcoat	Resutile HPS Topcoat	Premeasured Units	400 sq ft/unit Matte or Eggshell 340 sq ft/unit Satin	Premeasured Units

For additional topcoat options, contact your Sherwin-Williams Representative.

IMPORTANT!

Read these instructions carefully several days prior to starting your work. Seek answers to any questions you may have before you begin. For any questions, contact your local Technical or Sales Representative.

Resuwall HPF is applied by brush and roller method. When recommended spread rates are followed, Resuwall HPF will produce a nominal thickness of 42 mils.

SURFACE PREPARATION

Surface must be clean, dry and free of all oil and grease. Please refer to the master Surface Preparation Guide for more information. No epoxy coatings should be applied unless surface temperature is a minimum of 5°F above dew point. See Dew Point Calculation Chart on our website for detailed instructions.

MIXING AREA

Select a convenient mix area and protect the surface from spillage by covering with a layer of cardboard and/or sheet of plastic. Be generous with the amount of space you allocate for this function. The more comfortably your mixer works, the less likely you are to have a “mix error”. Make ready all necessary tools, mix and measure containers, etc. DO NOT MIX ANY MATERIAL UNTIL READY FOR IMMEDIATE USE. Once hardener and resin are combined, it must be used immediately.

RESUWALL HPF APPLICATION METHOD

NOTE: Resuwall HPF is for application on drywall only. A pre-installation meeting is recommended to determine surface finish. Substrate finish will affect final appearance of wall coating. Drywall must be finished to a minimum level #4 for matte finishes and level #5 for semi-gloss finishes (finishing level definitions are based on GA-214-96, “Recommended Levels of Gypsum Board Finish,” and are intended to provide an industry standard for drywall finishing). Drywall mud must be the setting type and not the drying type. Coverage will vary depending upon porosity and texture of substrate. Apply masking tape wherever coating is intended to stop.

Resuwall HP Gripper Primer is used with the Resuwall HPF system for priming. Resuflor Gard No-Sag epoxy is used for body, grout and seal coats. Two coats of Resuwall HP Topcoat are used as the topcoats. Coverage will vary depending upon porosity and texture of the surface.

A. **Priming –** For priming, Extreme Bond Primer can be applied to finished drywall surfaces with a synthetic, nylon or polyester brush, or a 3/8" nap synthetic roller. The spread rate using a brush or roller is 450-500 square feet/gal on smooth surfaces.

B. **Body Coat –** Resuflor Gard No-Sag is available in 1 and 5 gallon containers. The mix ratio is 1 part hardener to 2 parts resin by volume and mixed as follows: Pre-mix Resuflor Gard No-Sag hardener and resin separately for 2 - 3 minutes with a 750 RPM Jiffler-type mixer. Next, pour the hardener into the mix container; scrape bottom and sides with a mix stick to assure that all material is transferred to the mix bucket. Use the hardener pail to scrape the mix stick and never scrape the mix stick on the side of the mix pail. Next, add the resin into the mix container; scrape bottom and sides with a mix stick to assure that all the material is transferred to the mix bucket. Mix for 1½ - 2 minutes. Using a 3/8" (minimum) nap roller, apply at a spread rate of 200 - 250 square feet per gallon. Re-roll area after initial roll to eliminate any drip lines.

C. **Fiberglass Reinforcement** – Hang PGM semi-rigid fiberglass mat (available from Sherwin-Williams) directly into wet epoxy resin basecoat (similar to hanging wallpaper). Overlap each strip and trim using a "double cut" method so that the seams are uniform and even. Remove the trimmed material behind the front strip. After placing on the wall, use a broad knife and wallpaper brush to remove air pockets, wrinkles or irregularities. Immediately apply grout coat while Resuflor Gard No-Sag body coat is still wet (See grout coat instructions).

D. **Grout Coat** – The mix ratio is 1 part hardener to 2 parts resin by volume and mixed as follows: Pre-mix Resuflor Gard No-Sag hardener and resin separately for 2 - 3 minutes with a 750 RPM Jiffler-type mixer. Next, pour the hardener into the mix container; scrape bottom and sides with a mix stick to ensure all material is transferred to the mix bucket. Use the hardener pail to scrape the mix stick and never scrape the mix stick on the side of the mix pail. Next, add the resin into the mix container; scrape bottom and sides with a mix stick to assure that all the material is transferred to the mix bucket. Mix for 1½ - 2 minutes. Using a 3/8" (minimum) nap roller, apply at a spread rate of 80 square feet per gallon. Re-roll area after initial roll to eliminate any drip lines. Allow to cure for a minimum of 10 - 12 hours before sanding off bumps and other imperfections.

E. Second Grout Coat – Repeat Grout Coat steps; apply at 200 square feet per gallon.

IMPORTANT RESUWALL HP TOPCOAT NOTES:

- Do not thin
- Box lots to avoid lot-to-lot color variation
- Mix entire batch
- Patches may be noticeable due to application technique

F. **First Topcoat** – Resuwall HP Topcoat is supplied in pre-measured units consisting of a resin and a hardener. Pre-mix the resin for 2 - 3 minutes with ½" 750 RPM Jiffler type mixer and pour it into a mix bucket. Next, pour the hardener into the mix container; scrape bottom and sides with a mix stick to assure that all material is transferred to the mix bucket. Use the hardener pail to scrape the mix stick and never scrape the mix stick on the side of the mix pail. Using a ½" 750 RPM drill with a 3 inch jiffler blade, mix the resin and hardener for 30 seconds. Using a 3/8" (minimum) nap roller, apply at a spread rate of approximately 400 square feet per kit (matte, eggshell) or 340 square feet per kit (satin). Allow to cure for 1 - 2 hours before applying second topcoat.

G. **Second Topcoat** – Repeat step F. Allow to dry 16 - 24 hours.

IMPORTANT: Be sure to pour the hardener into the mixing bucket first when working with the epoxy and vice versa when working with the urethane. Always scrape the sides and bottom of mixing container to assure thorough blending. Do not allow any water on coated surface for 48 hours.

IMPORTANT!

Before using Sherwin-Williams High Performance Flooring products, read and understand their accompanying Safety Data Sheet.

STANDARD TERMS AND CONDITIONS OF SALE, INCLUDING STANDARD WARRANTY APPLY - VISIT **industrial.sherwin-williams.com/na/us/en/resin-flooring** FOR THE LATEST VERSION.

CAUTION! As with all chemical products, individuals may have different reactions to exposure to specific products. This is dependent upon many factors, including the individual's personal characteristics, the size of the installation, the ventilation available, the intensity of the exposure or the length of the exposure. Individuals may experience discomfort during the installation process of one product, but not another.

In some cases this is experienced as a skin irritation and in others it is experienced as an inhalant irritation. Typically, it disappears once the exposure is eliminated. In some cases people can become "sensitized" to a product and experience the discomfort every time there is exposure without Personal Protective Equipment ("PPE").

To protect yourself from various exposures or discomfort during the mixing and application of our products, we recommend covering exposed skin including using gloves, long sleeves, safety glasses and a respirator such as the 3M 8577 P95 Universal Disposable Carbon Respirator or a cartridge respirator.

Use only as directed. KEEP OUT OF REACH OF CHILDREN.

Do not reseal moisture-contaminated hardener. This will result in carbon dioxide generation or possible violent rupture of container.

THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams High Performance Flooring delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe.

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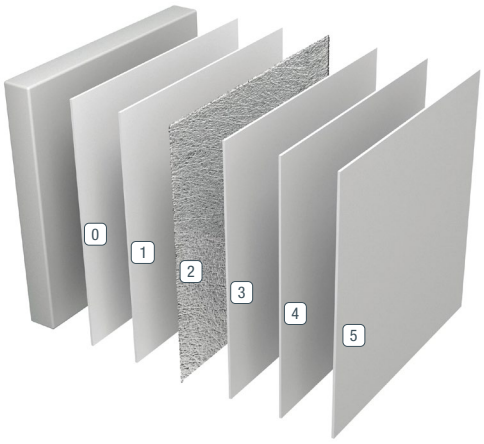
coatings@sherwin.com

High Performance Flooring
HPF-1530952-08 05/25

RESUWALL™ HPF

Resuwall HPF Wall System is a multi-step wall coating system designed specifically for areas requiring superior chemical resistance, durability and impact resistance. Resuwall HPF Wall System consists of a urethane-modified acrylic latex primer, Resuflor Gard No-Sag Epoxy with reinforcing fiberglass mat, two Resuflor Gard No-Sag Epoxy grout coats, and two coats of Resuwall HP Topcoat. Resuwall HP Topcoat is a pigmented, two-component, low odor, urethane formulation. Resuwall HPF is designed especially for drywall applications. This coating is extremely durable, sanitary and easy to clean, and will provide protection against very aggressive solvents, acids and alcohols. It features up to 10 times the scrubbing durability of traditional epoxy wall coatings and withstands aggressive cleaning regimens such as Vaporized Hydrogen Peroxide.



0 **Primer**
1 **Body Coat**
2 **Fiberglass Reinforcement**
3 **Grout Coat**
4 **First Topcoat**
5 **Second Topcoat**

BENEFITS

- Stain resistant
- Durable
- Easy to clean
- Sanitary
- Seamless
- Low odor
- Chemical resistant
- Impact resistant
- CA 01350 compliant
- Easy maintenance
- UV stable
- Scrub resistant

USES

- Pharmaceutical plants
- Operating/emergency rooms
- Patient rooms
- Corridors
- Laboratories
- Cleanrooms
- Animal holding areas

FEATURED COLORS

White | New Chapter | Melting Snow | From Center | New Traditions

San Marco | East End | First Edition | Bonsai Tree | Gemini Green

Standard and custom colors available. Please see the Resuflor Standard Industrial Color Card for details or envision a color in your space using our Flooring Visualizer Tool at floorvisualizer.sherwin-williams.com. This reproduction approximates the actual color. Factors such as the type of product, degree of gloss, texture, size and shape of area, lighting, heat or method of application may cause color variance. Contact your Sherwin-Williams representative for details.

ABOUT CHEMICAL RESISTANCE

Sherwin-Williams High Performance Flooring offers a broad range of systems to accommodate nearly every industrial, commercial and institutional setting. Each flooring system includes a standard chemical-resistant topcoat or surface proven to perform under typical conditions.

Important considerations:

- The combination of cleaning solutions, sanitizing chemicals, processing substances and products found in any operational setting is unique.
- Knowing exactly which materials are present — as well as their concentrations and typical exposure times before cleanup — is critical for proper flooring system selection.
- During the specification process, a flooring system's standard chemical-resistant topcoat may get replaced with one better suited to unique facility conditions.

The ability of a flooring system to perform as designed relies heavily on proper selection. Matching each use case with the right chemical-resistant flooring is key to having a facility looking great and functioning at peak level over the long term.

See our Chemical Resistance Guide and other technical resources on our website. Connect with a Sherwin-Williams High Performance Flooring expert for help with specifying an optimal flooring system for your facility.

TYPICAL PHYSICAL PROPERTIES

Color	White (can be tinted)	
Flame Spread, ASTM E-84/NFPA-101	Class A	
Pencil Hardness, ASTM D-3363	4H Scratch	
Impact Resistance, ASTM D-2794	140 in. lbs.	
MEK Rubs	>2,000 no noticeable gloss change or degradation	
Pot Life, 70°F, 50% RH	>2 hours	
Recoat Time	60-90 minutes (minimum)	
Recoat Window	Indefinite (sanding recommended)	
Return to Service	16-24 hours	
Full Chemical Resistance	7 days (VHP 14 days)	
VOC	HP Topcoat - 0 g/L, Extreme Bond Primer <50 g/L	
Abrasion Resistance, CS-17 wheel, Wt. Loss 1000 mg load, 1000 cycles, ASTM D-4060 (mgs loss)	Satin	74 mgs
Abrasion Resistance, CS-17 wheel, Wt. Loss 1000 mg load, 1000 cycles, ASTM D-4060 (mgs loss)	Eggshell	68 mgs
Abrasion Resistance, CS-17 wheel, Wt. Loss 1000 mg load, 1000 cycles, ASTM D-4060 (mgs loss)	Matte	84 mgs

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United States & Canada
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coatings@sherwin.com

RESUWALL HP STANDARD COLORS

Sherwin-Williams wall systems are designed to meet the durability and sanitary needs of the harshest environments. These systems resist chemical splashes to physical abrasions and simplify maintenance, ensuring the integrity of the wall surface remains uncompromised over time.

White

New Chapter

Melting Snow

From the Center

New Traditions

San Marco

Like Family

East End

Kensington

First Edition

Pink Salt

Lilac Linen

Colors may be affected by age, heat and exposure to sunlight. Please request an actual color sample of the product that you are considering to confirm the most accurate representation.

United States & Canada
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coatings@sherwin.com

Bonsai Tree

Gemini Green

Through the Rain

Custom Colors Available

Colors may be affected by age, heat and exposure to sunlight. Please request an actual color sample of the product that you are considering to confirm the most accurate representation.

United States & Canada
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coatings@sherwin.com

RESIN FLOORING CHEMICAL RESISTANCE GUIDE

	BROADCAST SYSTEMS			EPOXY COATINGS													URETHANE COATINGS					POLYASPARTIC/ FAST CURE COATINGS				URETHANE CONCRETE		ACRY-LICS
	RESUFLOR™ TOPFLOOR SL23	RESUFLOR® DECO QUARTZ DB23	RESUFLOR™ DECO FLAKE SB	RESUFLOR™ 3725	RESUFLOR™ 3555	RESUFLOR™ 3741 NOVOLAC	RESUFLOR™ 3746 SELF-LEVELING	RESUFLOR™ CRN NOVOLAC	RESUFLOR™ PT 250 TOPCOAT	RESUFLOR™ MPE MULTI-PURPOSE	RESUFLOR® GPE GENERAL PURPOSE	RESUFLOR® UVE UV-RESISTANT	RESUFLOR™ GARD	RESUFLOR™ GLAZE	RESUFLOR™ ULTRA	RESUFLOR™ VENT-E	RESUTILE™ 4638	RESUTILE™ 4685	RESUTILE™ HPS 100 AND HTS 100	RESUTILE™ SDS STATIC DISSIPATIVE	RESUTILE™ AT	ACCELERA™ 4850	ACCELERA™ 5	ACCELERA™ (REGULAR, EXT, LH)	ACCELERA™ ONE	POLY-CRETE (HF, MD, TF PLUS)	POLY-CRETE COLOR FAST	MMA COATINGS (CRYLAFLOR)	
3M™ Stainless Steel	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	OK	TS	TS	TS	
3M™ Duraprep	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	NR	SD	SD	TS	TS	NR	SD	TS	SD	TS	TS	SD	SD	SD	SD	SD	
AC-103 - 100%	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	OK	OK	SD	TS	TS	TS	TS	TS	OK	TS	TS	SD	TS	OK	SD	OK	
Acetaldehyde	TS	TS	TS	OK	SD	OK	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	SD	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	
Acetic Acid - 3%	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	OK	OK	OK	TS	TS	TS	TS	TS	OK	TS	TS	OK	TS	OK	OK	OK	
Acetic Acid - 5%	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	OK	OK	TS	OK	TS	TS	OK	TS	TS	TS	TS	
Acetic Acid - 10%	SD	OK	OK	OK	SD	OK	SD	SD	SD	SD	SD	SD	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	TS	OK	OK	OK	
Acetic Acid - 30%	SD	TS	TS	OK	SD	OK	SD	TS	TS	TS	TS	TS	SD	SD	OK	TS	SD	OK	TS	TS	SD	SD	TS	SD	TS	OK	SD	SD	
Acetic Acid - 50%	SD	TS	TS	OK	SD	OK	SD	TS	TS	TS	TS	TS	NR	NR	NR	TS	SD	OK	TS	TS	SD	SD	TS	SD	TS	SD	SD	NR	
Acetic Acid (50%) to Glacial (100%)	TS	TS	TS	SD	NR	SD	SD	TS	TS	TS	TS	TS	TS	TS	TS	TS	SD	SD	TS	TS	TS	SD	TS	TS	TS	TS	TS	TS	

View Full Chemical Resistance Chart

The Chemical Resistance Guide can be found in its entirety at: https://industrial.sherwin-williams.com/content/dam/pcg/sherwin-williams/resin-flooring/na/us/en-us/pdfs/project-prep-docs/Flooring-Chemical-Resistance-Guide-SW.pdf

OK = Recommended for exposure not to exceed 72 hours prior to cleaning
*Requires additional considerations; contact Tech Service Department

SD = Splash/spillage daily
TS = Contact Tech Service Department

NR = Not recommended

GUIDELINE INSTRUCTIONS FOR CONCRETE SURFACE PREPARATION (FORM G-1, REVISED 04/25)

INTRODUCTION

The following concrete surface preparation guidelines serve as an aid to owners, design professionals, specifiers and contractors. All surfaces to receive Sherwin-Williams High Performance Flooring sealers, coatings, mortars and resurfacers must be structurally sound and clean. Proper surface preparation is an extremely important factor in the immediate and long-term successful performance of applied polymer floor or wall systems.

The contractor responsible for the installation of the polymer system shall be provided a substrate that is clean, durable, flat, pitched to specifications and free of surface contaminants. Providing the properly prepared substrate is the responsibility of the owner, the owner's appointed representative and the concrete contractor, unless specifically stated otherwise.

PROPER SURFACE PREPARATION

Proper surface preparation includes the following:

1. Inspection of the concrete substrate
2. Removal and replacement of non-durable concrete
3. Decontamination of the concrete surface
4. Creation of surface profile
5. Repair of surface irregularities

1. **Inspection of the concrete substrate** to determine its general condition, soundness, presence of contaminants, presence of moisture vapor emissions and the best methods to use in preparation of the surface to meet the requirements of the owner or the owner's appointed representative is critical. A proper evaluation will lead to the selection of the proper tools and equipment to accomplish the objective.

2. **Removal and replacement of non-durable concrete** must be accomplished prior to installation of the polymer system. Localized weak or deteriorated concrete must be removed to sound concrete and replaced with either cementitious or polymer concrete repair mortars or an engineered concrete mix design. For application of these systems and compatibility with the selected polymer sealer, coating, lining or topping, refer to the appropriate application guide or the Technical Service Department. Occasionally, plain fresh concrete is required and must be bonded to existing concrete. When bonding fresh concrete to existing, prepare the existing concrete surface by scabbling, scarifying, abrasive (sand) blasting, needle scaling, high-pressure water jetting (5,000-45,000 psi), or steel shot blasting. Apply a low modulus epoxy as the bonding agent at a rate of 80 square feet per gallon for a WFT of 20 mils, and then place the fresh concrete or mortar. Bonding to lightweight concrete may require a second coat of epoxy if the first coat is readily absorbed into the concrete surface. Always place the fresh concrete within the open time of the epoxy, while the epoxy-bonding agent is still wet. Rough concrete surfaces will require additional material depending on the surface profile. Fresh concrete should have a low water/cement ratio (w/c) not to exceed 0.40. When bonding fresh concrete containing latex polymer admixtures, check compatibility of the latex modified concrete mixture by either installing a test patch and performing a pull-off test, or by conducting a slant shear test in accordance with ASTM C882 in an independent concrete testing laboratory.

3. **Decontamination of the concrete surface** requires the removal of oils, grease, wax, fatty acids and other contaminants, and may be accomplished by the use of detergent scrubbing with a heavy duty cleaner/degreaser, low-pressure water cleaning (less than 5,000 psi), steam cleaning or chemical cleaning. The success of these methods is dependent upon the depth of penetration of the contaminant, which is completely dependent upon the contaminant's viscosity, the concrete's permeability and the duration of exposure. Special care should be taken when preparing concrete at an "in use" facility for repair, replacement or an initial floor topping. This is especially true for food processing facilities. Contaminants can be carried into exposed concrete, as most of these facilities use copious amounts of water. The contaminants can be animal fats/oils, blood, cleaning solutions, microbes, etc. They may not be completely removed during preparation (shot blasting or grinding) even though the concrete may appear clean and well profiled.

   A simple method to ensure you have sound concrete is to test the pH. The chemistry of concrete is alkaline in nature. Normal concrete should be in the range of 11-13. Most of the contaminants mentioned are neutral to acidic in nature. After preparation, test the floor in multiple locations using distilled water and the pH paper. If the pH is 10 or lower, additional preparation will be required to ensure a good bond. In areas where the contaminants cannot be removed, the contaminated concrete must be removed and replaced as in Step 2 above.

   Caution: Decontamination methods that introduce large amounts of water may contribute to moisture-related problems as referenced in APPENDIX A.

4. **Creation of surface profile** can be accomplished by a number of methods, each utilizing a selection of tools, equipment and materials to accomplish the intended purpose (See METHODS OF SURFACE PREPARATION below). Selection is dependent upon the type of surface to be prepared and the type of system to be installed. In addition, floors, walls, ceilings, trenches, tanks and sumps each have their own particular requirements. The type and thickness of the selected polymer system also plays an important role in the selection process. Regardless of the method selected or tools employed, we must provide a surface that will accept the application of polymer-based products and allow the secure mechanical bond of the polymer to the concrete. The type of service the structure will be subjected to will also help to define the degree of profile required. The surface profile is the measure of the average distance from the peaks of the surface to the valleys as seen through a cross-sectional view of the surface of the concrete.

   This dimension is defined pictorially and through physical samples in the ICRI Technical Guideline No. 310.2, and is expressed as a Concrete Surface Profile number (CSP 1-10).

   - For Sherwin-Williams High Performance Flooring coating and sealing applications from 4-15 mils in thickness, the surface profile shall be CSP 1, 2 or 3, typically accomplished through decontamination of the concrete surface as defined in Step 3 above, followed by acid etching, grinding or light shot blast.
   - For Sherwin-Williams Resuflor™ Topfloor and other coating applications from 15-40 mils in thickness, the surface profile shall be CSP 3, 4 or 5, typically accomplished through decontamination of the concrete surface as defined in Step 3 above, followed by light shot blast, light scarification or medium shot blast.
   - For Sherwin-Williams Resuflor Deco Quartz, Resuflor Topfloor SL23, Resuflor Topfloor SL12 SD, Resuflor Topcoat Metallic, Resuflor Aqua Topfloor, Resuflor Aqua MCS, Poly-Crete® SLB and other topping applications from 40 mils-1/8", the surface profile shall be CSP 4, 5 or 6. These are typically accomplished through decontamination of the concrete as defined in Step 3 above, followed by light scarification, medium shot blast or medium scarification.
   - For Sherwin-Williams terrazzo systems, Resuflor Screed, Poly-Crete MD, Poly-Crete HF and other topping applications greater than 1/8", the surface profile shall be CSP 5, 6, 7, 8 or 9. These are typically accomplished through decontamination of the concrete as defined in Step 3 above, followed by medium shot blast, medium scarification, heavy abrasive blast, scabbling or heavy scarification.

5. **Repair of surface irregularities** including bugholes, spalls, cracks, deteriorated joints, slopes, areas near transition zones such as around drains and doorways, etc., must be repaired prior to the placement of the polymer system and/or the system must be designed to offset the thickness of the irregularities. For removal and replacement information and materials, refer to Step 2 above. For bugholes and other minor surface irregularities, fill with epoxy quick patch Resuflor 3500, Resuflor 3513 Instant Patch Resin or the system resin mixed with a vertical grade aggregate. For treatment of cracks and joints, refer to the section below entitled "Crack Isolation." For additional questions, contact the Technical Service Department or your local sales representative for specific recommendations.

For specific applications, always consult Sherwin-Williams System Overviews, Application Guides, data sheets or a Technical Service representative.

METHODS OF SURFACE PREPARATION

Depending upon conditions of the concrete, one or more methods of surface preparation may be required. It is common for decontamination to precede mechanical preparation, and if necessary a second decontamination to follow.

The preferred methods for creation of a surface profile, including the removal of dirt, dust, laitance and curing compounds, are steel shot blasting, abrasive (sand) blasting or scarifying. The steel shot blasting or vacuum blasting process is commonly referenced by equipment brand names, such as Blastrac, Vacu-Blast, Shot-Blast, etc. Vertical and overhead surfaces, such as cove base, wall and ceiling surfaces, shall be prepared utilizing methods of grinding, scarifying, abrasive (sand) blasting, needle scaling, high-pressure water jetting (5,000-45,000 psi) or vertical steel shot blasting.

Caution: The use of high-pressure water jetting will introduce large amounts of water, which may contribute to moisture-related problems as referenced in APPENDIX A. The following table provides a guide for the degree of surface profile required for the coating or overlay to be applied and the preparation methods used to generate each profile.

APPLICATION	PROFILE	SURFACE PREPARATION METHOD
SEALERS	0-3 mils	Detergent Scrub Low-pressure Water Acid Etching (not recommended) Grinding
THIN FILM	4-10 mils	Acid Etching (not recommended) Grinding Abrasive Blast Steel Shot Blast
HIGH-BUILD	10-40 mils	Abrasive Blast Steel Shot Blast Scarifying

APPLICATION	PROFILE	SURFACE PREPARATION METHOD
SELF-LEVELING	50 mils-1/8 inch	Abrasive Blast Steel Shot Blast Scarifying
POLYMER OVERLAY	1/8-1/4 inch	Abrasive Blast Steel Shot Blast Scarifying Needle Scaling High/Ultra-High Pressure Water Jetting Scabbling Flame Blasting Milling/Rotomilling

Surfaces to receive the bonded polymer system must be inspected after the surface is prepared to ensure that the substrate is sound and structurally durable. Areas found to be unsound or non-durable must be removed and replaced as described in Step 2 above. Dust or other deleterious substances not removed after the initial surface preparation must be vacuumed, leaving the surface dust free and clean.

Other surface preparation methods are mentioned in **Additional Surface Preparation References** below.

CRACK ISOLATION

The performance of elastomeric products such as Resuflor 3555 or Resuflor EOC internally flexible epoxy requires a relatively uniform dry film thickness to resist drying shrinkage and thermal movement of the concrete while maintaining a seamless bridge or seal over the concrete. Therefore it is critical that all mortar splatter, protrusions, ridges, penetrations or sharp projections in the surface of the concrete be ground smooth or otherwise made smooth, in addition to the normal surface preparation outlined above.

Prior to application of an elastomeric system, control/contraction joints, construction joints and cracks should be sealed with the selected system flexible sealant, i.e., Resuflor 3580 joint and crack filler. This coating should extend a minimum of 6″ on either side of the joint or crack. The entire surface area should then receive the specified crack isolation system. Isolation and/or expansion joints should be detailed in accordance with the plans and specifications of an architectural or engineering design professional for the type of structure being considered. Consult the Technical Service Department for the proper selection and use of isolation materials and the potential use of fiberglass scrim cloth for additional crack bridging capabilities.

Note: Sherwin-Williams High Performance Flooring systems can be applied to a variety of substrates if the substrate is properly prepared. Preparation of surfaces other than concrete or steel, such as wood, concrete block, brick, quarry tile, glazed tile, cement terrazzo, vinyl composition tile, plastics and existing polymer systems, can be accomplished to receive bonded polymer sealers, coatings or toppings. For questions regarding a substrate other than concrete or steel, or a condition not mentioned in this Guideline, contact the Technical Service Department prior to starting the project.

ADDITIONAL SURFACE PREPARATION REFERENCES

Important and relevant information on surface preparation of concrete is available by referencing the following codes, standards and guidelines.

ADDITIONAL SURFACE PREPARATION REFRENCES	
AMPP	Association for Materials Protection and Performance, 800 Trumbull Drive, Pittsburgh, PA 15205, (412) 281-2331 • SSPC-SP 13 Surface Preparation of Concrete • SSPC-TU 2/NACE 6G197 Design, Installation, and Maintenance of Coating Systems for Concrete Used in Secondary Containment
ICRI	International Concrete Repair Institute, 38800 Country Club Drive, Farmington Hills, MI 48331, (248) 848-3809 • Technical Guideline No. 310.2, "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays" Includes visual standards to act as a guide in defining acceptable surface profiles for the application of industrial coatings and polymer floor toppings. • Technical Guideline No. 03730, "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion"
ASTM	American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585 • ASTM D4258 "Practice for Surface Cleaning Concrete for Coating" • ASTM D4260 "Standard Practice for Acid Etching Concrete" • ASTM D4261 "Practice for Surface Cleaning Unit Masonry for Coating" • ASTM D4262 "Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces"

APPENDIX A: TESTING FOR MOISTURE VAPOR EMISSION FROM CONCRETE

Excess moisture in concrete can produce harmful effects of discoloration, interruption of the polymerization of products, and delaminating of non-permeable resinous systems. Sources of moisture fall into three distinct categories: moisture present at the surface prior to or during application, moisture within the concrete that attempts to escape during and after application and a distinct source of moisture in intimate contact with the concrete that provides a continuous supply of moisture. Avoiding moisture-related problems and understanding the options available for remediation once they occur is important. Detecting moisture in concrete may be accomplished by employing a number of methods briefly described below:

Relative Humidity Method BS 8201 and BS 5325 - These are British Standards that result in pass/fail of whether or not moisture is being emitted, but do not quantify the results. This is not a useful test.

Gel-B Bridge Test - This test measures electrical resistance of the concrete, but is dependent not only on the moisture content of the concrete, but also on the other constituents of the concrete. Calibration of the results obtained with this method depend on knowing the mix design of the concrete and the raw material used. At best it is a difficult interpretation.

Radio Frequency (Capacitance-Impedance) Method - This method relies on portable electronic moisture meters that transmit strong radio waves that are absorbed by water. Calibration of the results obtained with this method depends on knowing the mix design of the concrete and the raw material used.

Carbide-Acetylene Test - This destructive test tells us nothing about the relative movement of moisture out of the concrete. It only quantifies that the portions of concrete removed and tested contain a measured content of moisture.

ASTM F2170-02 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes - The test method, modeled after the process used in Europe for several years, requires drilling holes at a diameter of 5/8″ to a depth equal to 40% of the slab's thickness. The hole is then lined with a plastic sleeve, capped and allowed to acclimate for 72 hours. The probe is placed in the sleeve, allowed to equilibrate for 30 minutes, and then readings are recorded. **Acceptable relative humidity readings for substrates receiving non-permeable flooring are 80% or lower.** Testing should take place in an acclimated building and is required to equal three tests in the first 1,000 square feet, with one additional test per each additional 1,000 square feet of concrete slab surface. This test method is less subject to conditions occurring at the concrete surface that may influence calcium chloride test results. This method only defines existing moisture content of the sample and cannot address moisture vapor transmission.

ASTM D4263 - Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method - This qualitative method will indicate the presence of moisture movement, but it will not quantify the amount of moisture movement and is only useful in determining whether additional testing is required.

ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride Moisture Emissions Test - Originally developed by the Rubber Manufacturers Association, moisture vapor test kits use anhydrous calcium chloride to make a quantitative evaluation of vapor emissions from the concrete. To determine the amount of moisture movement, the floor and surrounding environment must be in the anticipated service condition. The test must be conducted over raw exposed concrete which has been exposed to the environment for at least 24 hours. A quantitative evaluation is conducted wherein the anhydrous calcium chloride container and contents are pre-weighed on a gram scale, allowed to remain in its container with the lid removed, and the container placed under a sealed dome to prevent loss of moisture for a period of 60-72 hours.

Three tests are required for the first 1,000 square feet, with one additional test for every 1,000 square feet or fraction thereafter. The container is removed and again weighed on a gram scale to determine the weight gain of the anhydrous calcium chloride. A calculation is performed to determine the amount of moisture absorbed. These results are quantified as the rate of moisture vapor transmission expressed as pounds per 1,000 square feet of surface area per 24 hours. Sherwin-Williams High Performance Flooring has adopted a commonly accepted value for application of polymer coatings or toppings to be not more than 3 pounds of moisture per 1,000 square feet per 24 hours.

Moisture content and moisture movement are merely snapshots in time of dynamic conditions within the concrete. Moisture vapor movement is dependent upon the relationship between temperature and humidity of the two adjacent environments — in this case, the internal environment of concrete and the external environment of the air surrounding the concrete. Any change in temperature and/or moisture content of either will result in a change in vapor pressure and the attempted movement of moisture vapor into or out of the concrete as referenced below.

It is the combination of temperature and humidity (called vapor pressure) that determines the direction of moisture movement. Moisture will move from a higher vapor pressure to a lower vapor pressure. When there is air movement over the surface of the concrete, moisture will attempt to move out of the concrete toward the area of air movement. For these reasons, it is important to measure the temperature and relative humidity during the test period. The Moisture Vapor Test Kit values will not be useful in predicting possible problem areas unless the tests are conducted in the environment in which the structure will be used. The air temperature and humidity around the concrete during the test should be the same air temperature and humidity that will be in place during the useful life of the structure. Contact the Technical Service Department if there are any questions concerning the use of the test kits or interpretation of the results.

To successfully and predictably reduce moisture vapor emission rates, apply one of the following remediation systems:

- Poly-Crete SLB
- Resuflor Aqua MCS
- Resuprime™ MVB, MVP, MVP3

Consult with the Technical Service Department for specific recommendations and utilize in accordance with application instructions. For slabs with potential moisture issues, utilizing systems that are designed to accommodate moisture movement from the slab such as Poly-Crete SLB, Resuflor Aqua and Resuprime MVB, MVP or MVP3 may be the most cost-effective alternative. Whenever moisture issues present themselves on a project, document the conditions, inform the owner representative and consult with Sherwin-Williams High Performance Flooring Technical Service personnel.

Note: The industry standard for curing concrete is 28 days. This is usually sufficient to allow excess moisture to leave a concrete slab. To minimize moisture-related disbondment, new concrete should be allowed to cure 28 days before installation of Sherwin-Williams High Performance Flooring non-permeable resinous flooring systems. If any doubts exist concerning moisture in the slab, Calcium Chloride and/or Humidity tests should be run to document the presence of moisture.

DEW POINT CALCULATION CHART (FAHRENHEIT)

% RELATIVE HUMIDITY	AMBIENT AIR TEMPERATURE °F										
	20	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**
90	18	28	37	47	57	67	77	87	97	107	117
85	17	26	36	45	55	65	75	84	95	104	113
80	16	25	34	44	54	63	73	82	93	102	110
75	15	24	33	42	52	62	71	80	91	100	108
70	13	22	31	40	50	60	68	78	88	96	105
65	12	20	29	38	47	57	66	76	85	93	103
60	11	19	27	36	45	55	64	73	83	92	101
55	9	17	25	34	43	53	61	70	80	89	98
50	6	15	23	31	40	50	59	67	77	86	94
45	4	13	21	29	37	47	56	64	73	82	91
40	1	11	18	26	35	43	52	61	69	78	87
35	-2	8	16	23	31	40	48	57	65	74	83
30	-6	4	13	20	28	36	44	52	61	69	77

TESTING

Testing for an Existing Sealer

Test to see if the floor is "sealed" by using the Water Break Test; please refer to ASTM 3191. If the poured water forms into droplets, then an existing sealer and/or paint may exist on the surface and must be removed by diamond grinding, steel shot blasting or other mechanical methods.

Salt Contamination Testing

Salt contaminated slabs that contain steel reinforcement are very susceptible to corrosion of the reinforcing steel. As the steel corrodes, it expands, causing cracking, delamination of concrete and any toppings bonded to it, and eventually, structural failure of the slab. Obvious signs of chloride or salt contamination are spalled concrete with exposed, rusted, reinforcing steel.

METHODS OF SURFACE PREPARATION

Diamond Grinding

Diamond grinding is another preferred choice for preparing concrete for polymer floor systems. Diamond grinders are floor grinders equipped with diamond abrasives. With multiple grit options available, they are capable of achieving a wide range of concrete surface profiles appropriate for most resinous flooring systems. Additionally, diamond grinding is used for mechanically profiling and removing existing coatings and adhesives. Immediately after diamond grinding, vacuuming is required to remove all dust from the substrate.

Hand Tool

Hand tool preparation consists of the use of mechanical tools and equipment designed to abrade or chip away the surface of the concrete. Common tools available include chipping hammers, handheld diamond grinders and concrete crack chasing saws. These tools are typically used to make keyways and prepare edges against walls and columns.

TYPES OF SUBSTRATES

Fiber-Filled Concrete

Fiber-filled concrete must be burned with a propane weed burner, swept and vacuumed perfectly clean, and then primed. When primer has completely cured, the floor must be sanded and tack ragged (This step may not be necessary for thick resurfacing systems).

Quarry/Ceramic Tile

Quarry/ceramic tile have been successfully resurfaced on many projects without the removal of the tile and setting bed. A site investigation along with cores through the entire slab will help identify the type of setting bed, the existence of any waterproofing membranes, additional toppings, or other unusual existing conditions. Water trapped within the floor will create long-term sanitation and performance problems.

If the tile is well bonded and placed over an unsaturated latex setting bed, the floor may be resurfaced. Please consult with a Sherwin-Williams Technical Service Representative to determine appropriate mechanical surface prep method, fillers and products.

Existing Epoxy Coating/Resurfacer

Existing seamless floors may be resealed or resurfaced from time to time due to excessive wear, or the need to change the appearance or skid resistance of the floor. The existing floor should first be cleaned and degreased with either EZ-Clean floor cleaner/degreaser or Simoniz 969 cleaner. It must then be mechanically abraded to totally remove the gloss and vacuumed perfectly clean. “Tack rag” area to remove remaining dust. Consult your Technical Service Manager to determine the best preparation for the individual coatings.

Plywood

The plywood substrate must be sound and non-flexing under the expected load. Typical plywood substrate must be exterior or marine grade, new, clean and smooth finish (NO KNOTS). Two layers with staggered joints are required. Plywood should be positively fastened to the existing surface with a high-quality construction adhesive as well as a 6″ screw pattern. For further information on plywood substrates, please contact your local sales representative or Sherwin-Williams technical department.

WALLS

For Resuwall applications:

Block Wall

Apply Block Filler to fill pores over new or existing concrete block, following the application instructions.

Drywall

Drywall must be finished to a level #5 paint-ready finish prior to coating. Prime with Extreme Bond Primer. Substrate will affect final appearance of wall coating.

NOTE: Resuwall products require preparation in order to perform as expected. Substrates must be clean, sound and dry. If installing over substrates other than block wall or drywall, please consult the Sherwin-Williams Technical Service Department.

MAINTENANCE RECOMMENDATIONS
GENERAL CLEANING & MAINTENANCE

Floors usually take the most abuse of any surface in the building. Floor maintenance is dependent upon the flooring system itself, the traffic conditions, and the type of dirt and debris to which it is exposed. Sherwin-Williams resinous floors are easily maintained because of their physical and chemical tough finishes.

In recognition of the need for regular floor maintenance, the following recommendations will help keep your Sherwin-Williams resinous floors looking like new. The recommended cleaning products and maintenance program is based on the type of floor you have.

RECOMMENDED CLEANING CHEMICALS

	AREA DESCRIPTION	RECOMMENDED CLEANER
FOOT TRAFFIC	Public areas, health care, dining room/cafeteria, lab, institutional, retail, foot traffic area	Neutral slip-resistant floor cleaner
LIGHT TO MODERATE SERVICE AREAS	Animal care, automotive service center, commercial kitchen/food prep area, patio	Cleaner/degreaser
MODERATE TO HEAVY SERVICE AREAS	Bottling plant, factory floor, loading dock, manufacturing/industrial, vehicular traffic area, stadium	Heavy-duty cleaner/degreaser
ESD/CONDUCTIVE FLOORS	Clean room, computer room, electronics production and assembly, quality control lab, surgery	Neutral floor cleaner
FOOD AND BEVERAGE PLANTS	Dairy plant, meat & poultry plant, food processing plant, brewery, winery and beverage plants	Cleaner/degreaser

CLEANING PROCESS

The best method to clean Sherwin-Williams flooring is a five-step process using the recommended cleaning product. The process varies between small and large floors, and between smooth and textured floors.

THE FIVE STEPS ARE:

- **Sweeping** - Always sweep the floor thoroughly before cleaning.
- **Application** - The means to put the cleaning product on the floor surface.
- **Agitation** - Movement of the cleaning product, with a piece of equipment, on the floor surface to aid in the release of foreign material.
- **Dwell Time** - Letting the cleaning product stand on the surface to allow time for emulsifying foreign material.
- **Removal** - Removing the cleaning product from the surface of the floor.

	SMOOTH FLOORING SURFACES		TEXTURED FLOORING SURFACES	
	SMALL AREA	LARGE AREA	SMALL AREA	LARGE AREA
SWEEPING	Broom or dust mop	Floor sweeper	Broom	Floor sweeper
APPLICATION	Synthetic mop or deck brush	Automatic floor scrubber	Deck brush or foamer/sprayer	Automatic floor scrubber or foamer/sprayer
AGITATION	Mop or deck brush	Automatic floor scrubber	Deck brush or rotary floor machine	Automatic floor scrubber or rotary floor machine
DWELL TIME	5-10 minutes	5-10 minutes	5-10 minutes	5-10 minutes
REMOVAL	Mop or wet vac	Automatic floor scrubber	Squeegee or wet vac	Automatic floor scrubber

Notes:

- Never use a mop to clean a floor that is greasy or oily.
- When using a deck brush, choose a medium/stiff bristle.
- When using a rotary floor machine, use a white, tan or red 3M pad or similar pad.
- When removing solution with a squeegee, use a soft, neoprene squeegee.
- Do not use a water spray to remove cleaning solution from the floor. It will over dilute the solution, causing greases and oils to fall back onto the floor surface.
- Through proper training and education, unnecessary wear of the floor, such as forklift spin and skid marks, can be avoided.
- Spills should be cleaned up immediately as a safety precaution as well as to prevent staining of the floor.
- Surfaces should be adequately protected when moving heavy equipment across the floor.

MAINTENANCE/DAMAGE PREVENTION

Sherwin-Williams resinous floors are installed with several basic types of finish coats including epoxy, polyurethane and acrylic.

Acrylic and polyurethane floors have exceptional mar and scratch resistance while epoxy finishes are harder and will scratch when subjected to abrasive dirt.

LIMITED PRODUCT WARRANTY

The Protective and Marine Division of The Sherwin-Williams Company (**"Sherwin-Williams"**) warrants the products in its Coating Systems to be manufactured free from defects in materials and workmanship for a period of one (1) year from the date of delivery (**the "Warranty Period"**).

Sherwin-Williams shall not be liable for any claims resulting from or related to (i) use of any Products in applications not recommended or approved in writing by Sherwin-Williams, (ii) improper application including improper surface preparation or failure to remove any bond breakers, curing compounds or laitance from the substrate, (iii) failure of or conditions related to the substrate, (iv) any damage or failure unrelated to the performance of the Products or (v) color.

EXCEPT FOR THE PRECEDING WARRANTIES, SHERWIN-WILLIAMS HEREBY DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, ORAL OR WRITTEN, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT SHALL SHERWIN-WILLIAMS BE LIABLE TO APPLICATION CONTRACTOR OR ANY OTHER PARTY FOR ANY INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR LOSS OF USE IN ANY WAY ARISING FROM THE MANUFACTURE, SALE, INSTALLATION OR PERFORMANCE OF THE PRODUCTS.

Sherwin-Williams agrees to provide replacement Product for any Product proven to be defective under this Limited Warranty. Sherwin-Williams' entire liability for any Product proven to be defective, and the sole and exclusive remedy in any way relating to the Product, shall be limited to the replacement Product to make the necessary repairs. This Limited Warranty shall be governed and construed in accordance with the laws of the state of Ohio. Any and all disputes, claims, actions or proceedings directly or indirectly arising out of or related to this Limited Warranty shall be decided solely and exclusively by a federal or state court located in Cuyahoga County, Ohio.

Any claim under this Limited Warranty must be made in writing to Sherwin-Williams within thirty (30) days of discovery and prior to the expiration of the Warranty Period. All claims shall be sent to: The Sherwin-Williams Company, 101 W. Prospect Avenue, Cleveland, OH 44115, Attention: Vice-President - Sales, Protective & Marine Division. Each claim under this Limited Warranty must contain a description of the alleged defect and Sherwin-Williams must have an opportunity to inspect the application and perform any required product testing to make a determination on the claim.