ResinForce®

Technical Data Sheet

RF-100
100% Solids Epoxy

DESCRIPTION:

RF-100 is a two-component 100% solids epoxy coating system. It exhibits very good chemical and physical properties, and is resistant to cold and crystallization. Can be used on concrete floors, counter tops, and other decorative surfaces. When used on concrete floors it is recommended to be applied over an MVB primer. Available pre-tinted or clear.

USES:

Residential Garages and Basements
Commercial Restaurants, Food Prep, Bars, Distilleries, Wineries, Breweries
Classrooms, Laboratories, Mechanical Rooms
Areas of light manufacturing, storage, or production • Retail Showrooms, Sales Floors, Waiting Rooms

ADVANTAGES:

Dense surface, resistant to bacteria and moisture, and is easy to clean.
May apply several layers onto itself with excellent adhesion.
Contains no solvent with a very low VOC content (VOC = 88g/liters), allowing for interior application without harmful odors.
Excellent adhesive properties allow application onto many different types of substrates

TECHNICAL PROPERTIES:

RF-100 Standard Cure Properties: Based on 73-77°F @ 50% RH*

Working time.....30-40 Mins	Pot Life..... 40-50 Mins
Tack Free.....8-12 Hours	Re-Coat Time……..... 16-24 Hours
Light Traffic.....……..... 2-3 Days	Full Cure……..…..…..5-7 Days*

**Note: Higher temperatures and humidity will shorten pot life and cure times. Colder temperatures and/or lower humidity will extend pot life and cure times.*

TECHNICAL DATA @ 77°F:

PART A Resin 2.0 US Gal. **PART B Hardener 1.0 US Gal.**

Color		**PART A** Upon Request	**PART B** Clear to Amber	**Mix** Upon Request
Recommended Thickness		**Primer** 6-8 mils **Finish Coat** 8-12 mils		
Mileage per gallon (8 mils thick)		200 ft²		
Mileage for Slurry Application (50% Silica Sand) (12 mils thick)		125 ft²		
Mileage for Trowel Epoxy Application (85% Silica Sand) (24 mils thick)		60 ft²		
Shelf Life		12 months in original unopened factory sealed containers. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.		
Mix Ratio, by volume		A:B - 2:1		
Mix Ratio, by weight	Clear Colors	A:B=100: 41-48 A:B=100: 39-45		
Pot Life (454g)		40-50 minutes @ 77˚F		
Solids Content, by weight		100%		
Solids Content, by volume		100%		
Density (kg/L)		**PART A**	**PART B**	**Mix**
	Clear	1.05 - 1.10	0.9 - 1.0	——
	Colors	1.10 - 1.15	0.9 - 1.0	——
Thinner Recommended		XYLENE		

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TECHNICAL DATA @ 77˚F (CONT.):

Waiting Time/Overcoat Ability Before Applying **RF-100** over Primer	Substrate Temperature	Minimum	Maximum
	+ 50°F	24 Hours	3 Days
	+ 68°F	12 Hours	2 Days
	+ 86°F	6 Hours	1 Day

Before Applying Second Coat of **RF-100**	Substrate Temperature	Minimum	Maximum
	+ 50°F	30 Hours	3 Days
	+ 68°F	24 Hours	2 Days
	+ 86°F	16 Hours	1 Day

Curing Details	Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
	+ 50°F	30 Hours	5 Days	10 Days
	+ 68°F	24 Hours	3 Days	7 Days
	+ 86°F	16 Hours	2 Days	5 Days

Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.

Bond Resistance (psi), ASTM D4541	>300 (substrate ruptures)
Permeability (%), ASTM D570	0.3 % VRM
Hardness (Shore D), ASTM D2240	85-90
Abrasive Resistance, ASTM D4060 (CS17 / 1000 cycles / 1000g)	0.10 g

Viscosty @ 77˚F	**PART A**	**PART B**	**Mix**
Clear	1200 - 1400	200-400	650 - 750
Colors	1400- 1600	200-400	1000 - 1400

Tensile Resistance (psi), ASTM D638	6500
Compressive Strength (psi MPa), ASTM D695	12000-13000
Elongation %, ASTM D638	6.7%

**Please not, that the indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same surface area*

SURFACE PREPARATION:

The concrete surface must be deemed mechanically and structurally sound, thoroughly clean of debris, oils, fats, waxes, sealers, curing agents, and other contamination. New concrete must be fully cured for a minimum of 28 days. Compressive strength of concrete should be at least 3,500 psi (24 Mpa) @ 28 days and at least 215 psi (1.5 Mpa) in tension at time of product application. Compression resistance of concrete must be at least 25 MPa (3625 lbs./inch^2) after 28 days and traction resistance must be at least 1,5 MPa (218 lbs./inch^2). Do not apply to wet concrete. Chloride, moisture, and pH levels should be checked prior to application. Mechanically prep the concrete surface by shot blasting or diamond grinding with 30 grit or coarser diamonds to achieve a dust free CSP-3 profile, which is required to remove the surface laitance that appears during the concrete finishing and curing process and obtain maximum mechanical bond. Substrate and material temperature should be 59°F - 86°F with a maximum relative humidity of 85%. If applied outside these limits the coating may have excessive air entrapment, bubbles, blisters, blushing, hazing, curing issues, or adhesion issues. All cracks and substrate imperfections should be filled and repaired with **ResinForce® EasyMend™** prior to application.

MIXING:

Materials should be at least 59°F prior to use. Pre-mix Part A and Part B separately with a slow speed mixer, or vigorously shake containers for 1-2 minutes prior to combining components together to ensure uniform distribution of raw materials. When using a 3-Gallon Kit, the Part A container can be used as the mixing container. Pour entire contents from the Part B container into the Part A container using proper mix ratio 2A : 1B by volume, then mix with a helix or jiffy mixer for 3 minutes at 300-450 rpm at various angles, directions, scooping sides, bottom, and all around for a good uniform mix. Avoid unnecessary entrapment of air during mixing. Make sure to scrape the walls and bottom of container with straight edged trowel or mixing stick at least once to ensure homogeneous mix. Make sure to empty ALL contents of PART B into PART A to avoid system weakening or incomplete curing. Do not mix more material than can be applied within working time limits. For best results, pour contents into a separate clean container and mix again for 30 seconds to avoid any unmixed material clinging to walls of the container. Avoid creating a vortex in the material which could introduce air and/or moisture content to the mixture. Immediately pour contents out of the pail onto the floor to begin spreading. Discard the pail promptly, do not leave it tilted upside down on the floor.

APPLICATION:

RF-100 is normally applied 50-150sq. ft. per gallon by brush, roller. ***RF-100*** should normally be recoated after an overnight cure period. However, if conditions are very cool and/or damp, 48 hours cure time should be allowed before recoating. If the product cures longer than 72 hours, the surface should be lightly sanded before recoating. When using a pigmented finish coat, keep a "wet edge" and do not attempt to roll over material that has begun to set as a change in color will result.

PRECAUTIONS & LIMITATIONS:

Prior to application, measure and confirm Substrate Moisture Content, Ambient and Surface temperatures and Dew Point. Moisture within substrate must be ≤ 4% by mass as measured by Tramex® type concrete moisture meter on mechanically prepared surface. AVOID CONDENSATION. The substrate must be at least 6°F above Dew Point to reduce risk of condensation. Condensation may lead to failure in adhesion. Avoid situations where substrate temperature is considerably lower than ambient temperature. Do not add thinners or solvents to mix. Do not add water. Dispose of waste materials in accordance with government regulations. The use of safety glasses and protective gloves is required. In case of contact, flush areas with abundance of water for 20 minutes and seek medical assistance. Wash skin with soap and water. Use only in well-ventilated areas.

- Minimum/Maximum temperature of substrate: 59 °F / 86 °F.
- Maximum relative humidity (RH) during application and curing: 85 %.
- Moisture Content (MC) of substrate must be < 4 % when coating is applied.
- Do not apply on porous surfaces where a transfer of humidity may occur during application.
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period.
- Surface may discolor in areas exposed to regular ultraviolet light.

WARRANTY

All statements, recommendations and technical information contained in this document are accurate to the best knowledge of ***ResinForce® Products, LLC***. The data relates only to the specific material designated herein. It may not be valid if used in combination with any other materials. It is the users' responsibility to verify the suitability of this information for their own particular use, and to test this product before use. ***ResinForce® Products, LLC*** assumes no legal responsibility for use upon this data. ***ResinForce® Products, LLC*** assumes no legal responsibility for any direct, indirect, consequential, economic, or any other damage except to replace the product or refund the purchase price as set out in the purchase agreement.

PART A INGREDIENT DISCLOSURE:

CAS: 25085-99-8	Bisphenol a diglycidyl ether homopolymer
CAS: 17557-23-2	Neopentyl Glycol Diglycidyl Ether
CAS: 28064-14-4	Phenol, polymer with formaldehyde, glycidyl ether
CAS: 100-51-6	Benzenemethanol
CAS:68609-97-2	C12-14-Alkyl glycidyl ether

PART B INGREDIENT DISCLOSURE:

CAS: 2855-13-2	Isophorone diamine
CAS: 84852-15-3	4-Nonylphenol, branched
CAS: 100-51-6	Benzyl alcohol

FOR MORE INGREDIENT INFORMATION VISIT WWW.RESINFORCE.COM

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