

TDS & Application Guide

Description

MRP is a specially formulated, water-based barrier primer, with excellent adhesion to both old and GREEN concrete, smooth or S3 Surface Prep EXT™ profile. This product is designed to be used as a barrier primer over concrete, old adhesive cutback, asphalt-based products, old adhesives, VCT tiles, wood flooring, or other solid surfaces. Provides moisture protection, with starting emission rates of ≤14 lbs., to reduce emission rates to under 3 lbs. per 1000 ft² / 24 hrs. or less. This barrier product can greatly reduce commercial floor preparation, delivering a stable and protective isolation from existing subfloor problems.

MRP Features & Benefits

- Unique 2-part water-based epoxy that forms an isolation barrier
- Reduces moisture vapor transmission rate from 14 lb. to <3 lb. per 1000 ft² / 24 hrs.
- Reduces surface alkalinity, can manage up to 14 pH
- Provides a matte-like surface to help promote co-adhesion of cement toppings and adhesives
- Very easy to roll onto floors with short nap roller, limited tools needed to install
- Excellent adhesion to “Green” and existing concrete, smooth or profiled
- Allows most cementitious patches and adhesives to adhere without use of additional primers
- Most adhesives and mastics can be applied within 6 hours of MRP installation
- V.O.C. compliant (<55g/L) and Non-Flammable
- Moisture barrier for installation of Wood, Tile, Epoxy, LVT, LVP, VCT, Sheet Vinyl, Cork, and Carpet
- Up to 60-minute pot life and flexible re-coat times

Applications as a Barrier Primer/Sealer

- As a moisture barrier primer over smooth or profiled concrete
- As a primer for epoxy & urethane coatings
- As a barrier primer over properly secured VCT and ceramic tiles
- As a barrier primer over existing adhesives, cut-back adhesives, and abated concrete
- As a primer over cementitious roofing systems to allow liquid applied topcoats
- As a primer to promote adhesion of cement patches, self-leveling systems, and floor adhesives

Product Details

Packaging	Pre-measured 4-gallon kits consisting of liquids (A&B)			
Color	Red			
Shelf Life	12 months in unopened containers; Do Not Allow Material to Freeze			
Set Time Guidelines		60°F	73°F	90°F
	Pot Life	60 minutes	60 minutes	45 minutes
	Foot Traffic	6+ hours	4-6+ hours	4-6 hours
Recommended Coverage	150 SF per gallon at 11 wet film thickness			
Mix Ratio by Volume	3B:1A			
Tack Free Time	4-6 hours at 73°F			
Solids content	55% solids			
Application Temperature	Should be applied between 40°F and 90°F			
VOC content	<55g/L as packaged			
ASTM 2170-11	Relative Humidity of slab should be ≤ 99% RH			
ASTM F 1869-11	Reduces MVER from 14 lbs. to <3 lbs. per 1000 ft ² / 24 hrs. (Calcium Chloride Method)			
ASTM D7234	Pull-off Strength 461 psi (failure in concrete)			

Concrete Preparation

Note that in general ALL substrates must be clean, sound, and have minimum 250 psi tensile bond strength when tested per ASTM D4541. Be sure concrete is free from oil, grease, paint, or any contaminants that would act to prohibit adhesion. Do not apply to concrete that has hardeners, curing agents, or densifiers, without first checking compatibility and adhesion. MRP should not be applied over slabs subject to Hydrostatic Pressure.

MOISTURE VAPOR TESTING: Prior to application of MRP, test for concrete moisture vapor emission rate using a calcium chloride test kit (ASTM F-1869-11) or perform Relative Humidity test (ASTM F-2170). These results will help determine if S3 MoistureShield™ is required or 1 or 2 coats of MRP will be required based on the threshold of 14 lbs. per 1000 ft² / 24 hours.

CONCRETE FINISH: S3 MRP is designed to go over smooth or profiled concrete; without the need to shot blast or scarify surface. Do not apply over glossy surfaces without first scratching up the surface, which will help assist adhesion. This can be achieved by buffing with 60-80 grit sandpaper or similar abrasive means. Optimal adhesion and prep come with a CSP 2-3 but is not required. Approved and recommended to use S3 Surface Prep EXT for cleaning and etching substrate.

NEW CONCRETE SYSTEM SOLUTION: S3 MRP is designed to go direct to GREEN concrete, applied in approximately 24 hours from fresh pour, or when a person can walk on the concrete surface without marring it. If MRP is being applied over a film forming cure & seal product, an adhesion test should be performed to ensure compatibility.

Mixing & Application

First, pre-mix the B-side to integrate fillers that have settled to the bottom of the pail. Best results are achieved with plastic paint mixer shown below, which will quickly loosen sediment from the bottom of the pail. Once sediment is loosened off the bottom of the pail, a high-speed hand drill will allow integration of the fillers into the liquids. Scrape bottom and corners of the pail with a paint stick to help loosen all material. Once fillers are off the bottom, they will integrate quickly using a high-speed hand drill and the paint mixer as shown below. Once B side fillers are mixed, slowly add part A to the part B, and continue mixing with the same high-speed hand drill. Acceptable mixing typically achieved in 1-2 minutes, make sure mixture looks completely integrated.

CORRECT Paint Mixing Blade:



WRONG Paint Mixing Blade:



After mixing, distribute the liquids into a roller pan and roll out immediately. The use of an 18" wide roller (3/8 nap) is recommended for most efficient results. S3 MRP must be applied in a consistent film, at a rate of 150 ft² / gallon or 600 ft² per 4-gal kit (depending on porosity) and should not be stretched beyond that rate. While rolling, you want to feel a pull or drag on the nap roller. Best practice is to layout application grids equal to application rate, to ensure proper coverage. Be sure to work material into all voids and pinholes to ensure mitigation performance. Allow to cure to tack free surface before trying to recoat and/or application of finished flooring. If material is left in the pail for more than 10 minutes, use mixer blade for 15 seconds to reconstitute any settled fillers back into the mixture.

For harsh conditions, you have three options, First, Surface Prep EXT™ for high pH or prior usage of chemical abatement products. Recoat can typically be applied when tack free, no sooner than 6 hours of installation of the first coat.

Installation Notes

S3 MRP can be successfully applied to existing VCT/VAT tiles, ceramic tiles, smooth & profiled concrete, green concrete, old floor adhesive & cutback adhesive, cementitious roofing materials, and other clean, sound surfaces. Any surface should be completely free from oils and greases, or any material that would prevent proper adhesion of MRP. Use a high-quality industrial degreasing product or S3 SurfacePrep EXT to properly remove any oils or greases. Caution when going over substrates that are covering concrete slab that have high moisture conditions, contact an S3 representative to discuss.

Smooth, shiny surface should first have its gloss knocked down to ensure proper adhesion of the MRP. Use simple methods to abrade glossy surfaces prior to installation of MRP.

MRP is designed to allow most quality cement patch skim coat and self-leveling materials to bond to it and pass the carpet tile and LVT adhesive pull test. Such patches can be applied as soon as MRP can be walked on without marring or disturbing MRP bond, typically 8 hours after installation.

When applying MRP over existing subfloor materials, good construction practices MUST be applied to ensure a quality and warranted solution. Any existing floor materials that are loose, flaking, blistered, or not properly bonded to the original slab, should be scraped, sanded, and/or removed. MRP will bond to many existing floor products, but those products MUST be bonded to the floor slab to achieve a solid and secure final floor system.

Cautions/Limitation

Surface must be free of dust & dirt, drywall mud/debris, oils, greases, or any other contaminant that might affect bonding. Do not use in areas subject to Hydrostatic Pressure. Please see warranty documents that detail installation and product warranties related to S3 MRP.

Clean Up

S3 MRP, while still wet, can be cleaned up with a scouring pad and warm soapy water. If allowed to set, then mechanical cleaning or the application of a suitable paint stripper is required. Dispose of excess material in accordance with local, state, and federal regulations.

Storage

S3 MRP should be stored in closed containers, between temperatures 50-90°F. **Do not allow to freeze.**

Safety Precautions

HEALTH CONSIDERATIONS

As with all epoxies, good hygienic habits must be observed, and the wearing of protective clothing and gloves is advised. Before using any S3 Surface Solutions, LLC. product, please read and follow the product Safety Data Sheet (SDS). Use this product only as directed. Keep out of the reach of Children.

FOR YOUR PROTECTION

The data, statements and recommendations set forth in this product information sheet are based on research and development work which has been carefully conducted by S3 Surface Solutions, LLC. and we believe such data, statements and recommendations will serve as reliable guidelines. This product is subject to numerable uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any use. Users are advised to test the product in advance to make certain it is suitable for their installation conditions and uses.

DISCLAIMER

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WARRANTY

The data, statements and recommendations set forth in this product information sheet are based on testing, research and other development work which has been carefully conducted by us, and we believe such data, statements and recommendations will serve as reliable guidelines. However, this product is subject to numerable uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and particular use or uses.

WARRANTY - All products manufactured by us are warranted to be first class material and free from defects in material and workmanship. Liability under this warranty is limited to the net purchase price of any such products proven defective, or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claims hereunder on defective products must be made in writing within 30 days after the receipt of such products in your plant and prior to further processing or combining with other materials and products. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE SUITABILITY OF ANY OF OUR PRODUCTS FOR ANY PARTICULAR USE, AND WE SHALL NOT BE SUBJECT TO LIABILITY FROM ANY DAMAGES RESULTING FROM THEIR USE IN OPERATIONS NOT UNDER OUR DIRECT CONTROL. THIS WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES.