Permasolid®
Spectro Sealer 5450 – National Rule

GENERAL

DESCRIPTION

A premium low VOC, 2K high solid system that can be used as a wet-on-wet sealer, under hood color, sanding surfacer, or as a flexible sealer or surfacer for plastic repairs. Now available in black, white, red, blue, green, and yellow. All colors may be mixed together to get an unlimited number of colors including shades of gray. This easy-to-apply productive sealer/surfacer has been designed for use with both Permahyd® Hi-TEC 480 and Permacron® Base Coat Series 293/295.

The products referenced herein may not be available for sale in your market. Please consult your distributor for product availability.

MIXING

COMPONENTS

Permasolid® Spectro Sealer 5450

PERMASOLID HS HARDENERS

Permasolid® HS Hardener 3307 Express,
Permasolid® HS Hardener 3309 Extra Fast,
Permasolid® HS Hardener 3310 Fast,
Permasolid® HS Hardener 3315 Medium,
Permasolid® HS Hardener 3320 Slow, or
Permasolid® HS Hardener 3325 Extra Slow

Or

PERMASOLID VHS HARDENERS

Permasolid® VHS Hardener 3220 Express,
Permasolid® VHS Hardener 3230 Medium,
Permasolid® VHS Hardener 3240 Slow, or
Permasolid® VHS Hardener 3245 Extra Slow

For optimum hardener selection, refer to TDS #061 or 3220 - 3245.

ADDITIVES

Permasolid® Surfacer Additive 5408 Fast
Permasolid® Surfacer Additive 5409
Permasolid® Surfacer Additive 5410 Slow
Permasolid® Elastic Additive 9050 (before hardener)

For optimum reducer/additive selection, refer to TDS # 780.0.

MIX RATIO – WET-ON-WET SEALER / UNDER HOOD COLOR

SEALER / UNDER HOOD COLOR WITH HS HARDENERS

Component	Volume
5450	3
3307 / 3309 / 3310 / 3315 / 3320 / 3325	1
5409 / 5410	+20-25%

ELASTIC SEALER WITH HS HARDENERS

Component	Volume
5450	2
9050	+15-30%
3307 / 3309 / 3310 / 3315 / 3320 / 3325	1
5409 / 5410	+20-25%

SEALER / UNDER HOOD COLOR WITH VHS HARDENERS

Component	Volume
5450	5
3220 / 3230 / 3240 / 3245	1
5409 / 5410	+25-30%

ELASTIC SEALER WITH VHS HARDENERS

5450	4
9050	+15-30%
3220 / 3230 / 3240 /3245	1
5409 / 5410	+25-30%

APPLICATION VISCOSITY

As a Wet-On-Wet Sealer: 13-14 seconds at 68°F/20°C, DIN 4

POT LIFE

As a Wet-On-Wet Sealer: Approximately 1 hour at 68°F/20°C when ready to spray.

MIX RATIO – MEDIUM BUILD SANDING SURFACER

SANDING SURFACER WITH HS HARDENERS

Component	Volume
5450	4
3307 / 3309 / 3310 / 3315 / 3320 / 3325	1
5408	+5%

ELASTIC SANDING SURFACER WITH HS HARDENERS

5450	3
9050	+15-30%
3307 / 3309 / 3310 / 3315 / 3320 / 3325	1
5408	+5%

Permasolid® Spectro Sealer 5450 White and Black can be combined per the table below to achieve the color positions of the existing Permasolid® HS Premium Surfacer 5310 – Light and Dark Gray.

	5310 (Light Gray) Color Position				5310 (Dark Gray) Color Position			
Pour Size	**Half Liter**		**Liter**		**Half Liter**		**Liter**	
Individual weights (in grams)	**No Reduction**		**5% Reduction**		**No Reduction**		**5% Reduction**	
5450 White, SP 150	649.0	1298.0	619.0	1238.0	495.0	990.0	471.0	942.0
5450 Black, SP 151	10.0	20.0	9.5	19.0	150.0	300.0	143.0	286.0
HS Hardeners	102.0	204.0	97.0	194.0	102.0	204.0	97.0	194.0
5408 Fast	0.0	0.0	21.5	43.0	0.0	0.0	21.5	43.0

Permasolid® Spectro Sealer 5450 White and Black can be combined per the table below to achieve the color position of the existing Permasolid® Vario Surfacer 8590 Gray.

	8590 Color Position			
Pour Size	**Half Liter**		**Liter**	
Individual weights (in grams)	**No Reduction**		**5% Reduction**	
5450 White, SP 150	628.0	1256.0	598.0	1196.0
5450 Black, SP 151	30.0	60.0	28.5	57.0
HS Hardeners	102.0	204.0	97.0	194.0
5408 Fast	0.0	0.0	21.5	43.0

SANDING SURFACER WITH VHS HARDENERS

Component	**Volume**
5450	6
3220 / 3230 / 3240 / 3245	1
5408	+5-10%

ELASTIC SANDING SURFACER WITH VHS HARDENERS

5450	5
9050	+15-30%
3220 / 3230 / 3240 / 3245	1
5408	+5-10%

Permasolid® Spectro Sealer 5450 White and Black can be combined per the table below to achieve the color positions of the existing Permasolid® HS Premium Surfacer 5310 – Light and Dark Gray.

	5310 (Light Gray) Color Position				5310 (Dark Gray) Color Position			
Individual weights (in grams)	**5% Reduction**		**10% Reduction**		**5% Reduction**		**10% Reduction**	
Pour Size	**Half Liter**	**Liter**	**Half Liter**	**Liter**	**Half Liter**	**Liter**	**Half Liter**	**Liter**
5450 White, SP 150	637.0	1274.0	608.0	1216.0	505.0	1010.0	482.0	964.0
5450 Black, SP 151	10.0	20.0	9.5	19.0	153.0	306.0	146.0	292.0
VHS Hardeners	69.5	139.0	66.5	133.0	72.5	145	69.0	138.0
5408 Fast	20.5	41.0	39.5	79.0	21.5	43.0	41.0	82.0

Permasolid® Spectro Sealer 5450 White and Black can be combined per the table below to achieve the color position of the existing Permasolid® Vario Surfacer 8590 Gray.

	8590 Color Position			
Pour Size	**Half Liter**		**Liter**	
Individual weights (in grams)	**5% Reduction**		**10% Reduction**	
5450 White, SP 150	616.0	1232.0	588.0	1176.0
5450 Black, SP 151	29.5	59.0	28.0	56.0
VHS Hardeners	69.5	139.0	66.5	133.0
5408 Fast	20.5	41.0	39.5	79.0

APPLICATION VISCOSITY

As a Sanding Surfacer: 18-22 seconds at 68°F/20°C, DIN 4

POT LIFE

As a Sanding Surfacer: Approximately 1 hour at 68°F/20°C when ready to spray.

SPECIAL TIPS

1. When using ColorNet®, Permasolid® Spectro Sealer 5450 can be easily mixed by weight on the scale.
2. When mixing Permasolid® Spectro Sealer 5450, do not substitute with additional 2K reducers or replace Permasolid® Surfacer Additive 5409, Permasolid® Surfacer Additive 5410 Slow, or Permasolid® Surfacer Additive 5408 Fast with 2K Reducers.
3. Always reduce to recommended viscosity; additional Permasolid® Surfacer Additive 5409 or Permasolid® Surfacer Additive 5410 Slow may be used without impacting compliance.
4. Permasolid® VHS Hardener 3220 Express should be used for best results when mixing and using Permasolid® Spectro Sealer 5450 as a sanding surfacer in cool temperatures (<68°F/20°C).
5. When using VHS Hardeners, be sure the mixture is stirred very thoroughly.
6. Due to lower viscosity, lower spray pressure may be considered (24 – 27 PSI).
7. In order to make sanding easier, apply guide coat before sanding.
8. When air drying, a minimum temperature of 55°F/13°C must be maintained or 46°F/8°C when using Permasolid® HS Hardener 3307 Express.
9. Sanded surface should be re-sanded if not top-coated within 8 hours.

10. Over-application or lack of proper flash times will result in less than optimal performance.
11. Product must be stored above 60°F/15°C.
12. When finishing plastics please refer to VR Technical Data Sheet No. 901.1.
13. When used as an under hood color, top coat is not required.

APPLICATION

SUBSTRATES

Thoroughly degreased, non-sanded or lightly sanded E-coat
Original or old paintwork (except reversible substrates, Example: lacquer).
Properly prepared fiberglass with no exposed fibers.
Raderal® Polyester products
Priomat®, Permahyd®, and Permasolid® Primers and Surfacers

SURFACE PREPARATION

- Degrease and sand.
- Prior to applying a sanding surfacer, sand body filler with P180 or finer grit sandpaper and/or sand feather edge areas with P180, then P240, and finish with P320.
- For wet-on-wet sealer application, finish sand with P400.
- Before further treatment, clean all substrates thoroughly with Permaloid® Silicone Removers 7087 or 7010 Slow, Permahyd® Silicone Remover 7085, or Permahyd® Silicone Remover 7096.

*Special Note - In order to ensure optimum corrosion protection, we recommend to coat areas of bare metal including small sand through spots with Priomat® Wash Primer 4075, Priomat® Primer 3255 Red Brown, or Priomat® 1K Primer Surfacer 4085.

SPRAYGUN SETUP

	Sealer	Surfacer
HVLP	1.3-1.4mm	1.4-1.6mm
Approved Transfer Efficiency	1.2-1.3mm	1.4-1.6mm

Please refer to gun manufacturer and local legislation for proper spray pressure recommendations.

APPLICATION

- As a Wet-On-Wet Sealer: Apply a light coat followed by a medium coat without intermediate flash-off.
- As a Wet-On-Wet Sealer: Recoat after a minimum of 20 minutes or max. overnight flash-off before topcoat.
- As a Medium Build Sanding Surfacer: Apply 2-4 coats with 10-15 minute intermediate flash-off between coats.

RECOMMENDED FILM THICKNESS

As an Under Hood Color: 1.5 coats for 0.8 – 1.0 mil dry film thickness
As a Wet-On-Wet Sealer: 1.5 coats for 1.0 – 1.2 mil dry film thickness
As a Medium Build Sanding Surfacer: 2 - 4 coats for 3.0 – 6.0 mil dry film thickness

DRY TIMES

AIR DRYING – MEDIUM BUILD SANDING SURFACER

Drying time at 68°F/20°C:	3-4 hours at 3.0 – 6.0 mil

LOW BAKE

Flash-off time:	10-15 minutes
Drying time at 130°F/55°C metal temp.:	30 minutes at 3.0 – 6.0 mil

INFRARED DRYING

Flash-off time:	10-15 minutes
1. Short wave:	10 minutes at 3.0 – 6.0 mil
2. Medium wave:	15 minutes at 3.0 – 6.0 mil

DRY SANDING

Dry Sanding with random orbital sander and dust extraction

Initial sanding:	P320
Final sanding:	P500 – 800

WET SANDING

Initial sanding:	P320
Final sanding:	P600 – 800

RECOAT

With Permacron® Base Coat Series 293/295 or Permahyd® Hi-TEC 480

PHYSICAL PROPERTIES

Coating Category: Sealer (Wet-on-Wet Sealer / Underhood Color with HS Hardeners)
Max. VOC (AP): 192 g/l; 1.6 lbs/gal
Max. VOC (LE): 324 g/l; 2.7 lbs/gal
Avg. Gallon Weight: 1467.5 g/l; 12.25 lbs/gal
Avg. Weight % Volatiles: 48.8 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 35.5%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 39.5%

Theoretical Coverage: 625.3 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 500 - 625 sq. ft.

Coating Category: Sealer (Elastic Sealer with HS Hardeners)
Max. VOC (AP): 228 g/l; 1.9 lbs/gal
Max. VOC (LE): 336 g/l; 2.8 lbs/gal
Avg. Gallon Weight: 1353.0 g/l; 11.29 lbs/gal
Avg. Weight % Volatiles: 48.4 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 31.5%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 32.2%

Theoretical Coverage: 685.4 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 571 - 685 sq. ft.

Coating Category: Sealer (Wet-on-Wet Sealer / Underhood with VHS Hardeners)
Max. VOC (AP): 132 g/l; 1.1 lbs/gal
Max. VOC (LE): 240 g/l; 2.0 lbs/gal
Avg. Gallon Weight: 1506.3 g/l; 12.57 lbs/gal
Avg. Weight % Volatiles: 47.3 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 38.2%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 43.6%

Theoretical Coverage: 656.5 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 656 - 821 sq. ft.

Coating Category: Sealer (Elastic Sealer with VHS Hardeners)
Max. VOC (AP): 156 g/l; 1.3 lbs/gal
Max. VOC (LE): 240 g/l; 2.0 lbs/gal
Avg. Gallon Weight: 1408.4 g/l; 11.75 lbs/gal
Avg. Weight % Volatiles: 45.6 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 34.9%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 37.2%

Theoretical Coverage: 734.9 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 734 - 612 sq. ft.

Coating Category: Primer (Sanding Surfacer with HS Hardeners)
Max. VOC (AP): 216 g/l; 1.8 lbs/gal
Max. VOC (LE): 324 g/l; 2.7 lbs/gal
Avg. Gallon Weight: 1536.4 g/l; 12.82 lbs/gal
Avg. Weight % Volatiles: 42.2 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 28.3%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 33.3%

Theoretical Coverage: 688.1 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 115 - 229 sq. ft.

Coating Category: Primer (Elastic Sanding Surfacer with HS Hardeners)
Max. VOC (AP): 240 g/l; 2.0 lbs/gal
Max. VOC (LE): 324 g/l; 2.7 lbs/gal
Avg. Gallon Weight: 1409.3 g/l; 11.76 lbs/gal
Avg. Weight % Volatiles: 40.5 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 23.3%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 25.1%

Theoretical Coverage: 768.4 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 128 - 256 sq. ft.

Coating Category: Primer (Sanding Surfacer with VHS Hardeners)
Max. VOC (AP): 180 g/l; 1.5 lbs/gal
Max. VOC (LE): 300 g/l; 2.5 lbs/gal
Avg. Gallon Weight: 1557.7 g/l; 13.0 lbs/gal
Avg. Weight % Volatiles: 43.4 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 31.6%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 37.5%

Theoretical Coverage: 670.8 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 112 - 224 sq. ft.

Coating Category: Primer (Elastic Sanding Surfacer with VHS Hardeners)
Max. VOC (AP): 204 g/l; 1.7 lbs/gal
Max. VOC (LE): 288 g/l; 2.4 lbs/gal
Avg. Gallon Weight: 1441.8 g/l; 12.03 lbs/gal
Avg. Weight % Volatiles: 41.4 %
Avg. Weight % Water: 0.0%
Avg. Weight % Exempt Solvent: 27.3%
Avg. Volume % Water: 0.0%
Avg. Volume % Exempt Solvent: 29.9%

Theoretical Coverage: 756.3 sq. ft. @ 1 mil
Theoretical Coverage @ Recommended Film Build: 126 - 252 sq. ft.

VOC REGULATED AREAS

These directions refer to the use of products which may be restricted or require special mixing instructions in VOC regulated areas. Follow mixing usage and recommendations in the VOC Compliant Products Chart for your area.

SAFETY AND HANDLING

For industrial use only by professional, trained painters. Not for sale to or use by the general public. Before using, read and follow all label and MSDS precautions. If mixed with other components, mixture will have hazards of all components.

Ready to use paint materials containing isocyanates can cause irritation of the respiratory organs and hypersensitive reactions. Asthma sufferers, those with allergies and anyone with a history of respiratory complaints must not be asked to work with products containing isocyanates.

Do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves.

Any analytical results set forth herein do not constitute a warranty of specific product features or of the product's suitability for a specific purpose. All products are sold pursuant to our general conditions of sale. We hereby disclaim all warranties and representations, express or implied, with respect to this product, including any warranty of merchantability or fitness for a particular purpose. This product is protected by patent law, trademark law, copyright law, international treaties and/or other applicable law. All rights reserved. Unauthorized sale, manufacturing or use may result in civil and criminal penalties.

Revised: April 2016