



Technical Data Sheet.

Permasolid® HS Vario Surfacers 8590

Versatile surfacer for the Classic System

Permasolid HS Vario Surfacers 8590 is a high-quality 2K HS surfacer based on acrylic resins which is very versatile in use. It can be applied wet-on-wet or can be used as a sanding surfacer.

- Achieves very good topcoat holdout.
- Has good insulating properties even in combination with old thermoplastic coatings.
- Can be mixed with Permasolid HS and VHS Hardeners.



For professional use only!

Spies Hecker simply closer.



An Axalta Coating Systems Brand

Permasolid® HS Vario Surfacer 8590

Product preparation - application STANDARD WET ON WET VHS



It is strongly recommended to use appropriate personal protection equipment during application to avoid respiratory, skin and eye irritation.



OEM Primer (e-coat), finely sanded or unsanded and thoroughly cleaned. Remark: due to the wide variety of electrocoats present on the market, its quality can differ a lot. For this reason preferably scuff sand the e-coat

Old or original paintwork well sanded and cleaned.

Steel, galvanised steel or soft aluminium, sanded and cleaned and coated with Wash Primer

Surfaces pretreated with 2K polyester products and then finely sanded and cleaned

Glass fibre reinforced polyester substrates, free of release agents, sanded and cleaned.



Surfacer		Hardener		Reducer	
Volume	Weight	Volume	Weight	Volume	Weight
5	100	1	14	30 %	19
8590		3225 3230 SLOW 3240 EXTRA SLOW		3364 3365 SLOW 3380 3385 SLOW	



Pot life at 20°C: 30 min - 1 hr



	Spray nozzle	Spray pressure	
Compliant	1.3 - 1.4	1.5 - 2 bar	inlet pressure
HVLP	1.3 - 1.4	0.7 bar	atomisation pressure

see manufacturer's instructions



0.5 + 1

1 operation

1st: thin and closed

2nd: normal

final flash-off: 30 min - 1 hr 30 min can be

reduced to 15-20 min if overcoated with

solventbased topcoats / Permacron Basecoat

293/295.



Permasolid HS Automotive Top Coat 275 / Permacron Automotive Top Coat 257 / Permacron MS Automotive Top Coat 730

Permahyd Hi-TEC Base Coat 480 / Permahyd Base Coat 280/285/286 + Clearcoat

VOC compliant

2004/42/IIB(C)(540) 540: The EU limit value for this product (product category: IIB(C)) in ready to use form is maximum 540 g/l of VOC. The VOC content of this product in ready to use form is maximum 540 g/l.

Permasolid® HS Vario Surfacer 8590

Product preparation - application STANDARD WET ON WET HS



It is strongly recommended to use appropriate personal protection equipment during application to avoid respiratory, skin and eye irritation.



OEM Primer (e-coat), finely sanded or unsanded and thoroughly cleaned. Remark: due to the wide variety of electrocoats present on the market, its quality can differ a lot. For this reason preferably scuff sand the e-coat

Old or original paintwork well sanded and cleaned.

Steel, galvanised steel or soft aluminium, sanded and cleaned and coated with Wash Primer

Surfaces pretreated with 2K polyester products and then finely sanded and cleaned

Glass fibre reinforced polyester substrates, free of release agents, sanded and cleaned.



Surfacer		Hardener		Reducer	
Volume	Weight	Volume	Weight	Volume	Weight
3	100	1	22	20 - 25 %	14 - 18
8590		3309 FAST 3310 3312 SLOW 3315 EXTRA SLOW		3364 3365 SLOW 3380 3385 SLOW	



Pot life at 20°C: 30 min - 1 hr



	Spray nozzle	Spray pressure	
Compliant	1.3 - 1.4	1.5 - 2 bar	inlet pressure
HVLP	1.3 - 1.4	0.7 bar	atomisation pressure

see manufacturer's instructions



0.5 + 1

1 operation

1st: thin and closed

2nd: normal

final flash-off: 30 min - 1 hr 30 min can be

reduced to 15-20 min if overcoated with solventbased topcoats / Permacron Basecoat 293/295.



Permasolid HS Automotive Top Coat 275 / Permacron Automotive Top Coat 257 / Permacron MS Automotive Top Coat 730

Permahyd Hi-TEC Base Coat 480 / Permahyd Base Coat 280/285/286 + Clearcoat

VOC compliant

2004/42/IIB(C)(540) 540: The EU limit value for this product (product category: IIB(C)) in ready to use form is maximum 540 g/l of VOC. The VOC content of this product in ready to use form is maximum 540 g/l.

Permasolid® HS Vario Surfacer 8590

Product preparation - application STANDARD SANDING VHS



It is strongly recommended to use appropriate personal protection equipment during application to avoid respiratory, skin and eye irritation.



OEM Primer (e-coat), finely sanded or unsanded and thoroughly cleaned. Remark: due to the wide variety of electrocoats present on the market, its quality can differ a lot. For this reason preferably scuff sand the e-coat

Old or original paintwork well sanded and cleaned.

Steel, galvanised steel or soft aluminium, sanded and cleaned and coated with Wash Primer

Surfaces pretreated with 2K polyester products and then finely sanded and cleaned

Glass fibre reinforced polyester substrates, free of release agents, sanded and cleaned.



Surfacer		Hardener		Reducer	
Volume	Weight	Volume	Weight	Volume	Weight
5	100	1	14	10 - 20 %	6 - 13
8590		3225 3230 SLOW 3240 EXTRA SLOW		3364 3365 SLOW 3380 3385 SLOW 8580	



Pot life at 20°C: 30 min - 1 hr



	Spray nozzle	Spray pressure	
Compliant	1.4 - 1.8	1.5 - 2 bar	inlet pressure
HVLP	1.7 - 1.9	0.7 bar	atomisation pressure

see manufacturer's instructions



2 - 3 coats

intermediate and final flash-off: 5 min - 10 min



	3225 / 3230 SLOW / 3240 EXTRA SLOW
20 °C	12 hr - 16 hr
60 - 65 °C	25 min - 40 min



Guideline for short wave IR equipment

Half power: 2 min

Full power: 8 min



P400 - P600



Permasolid HS Automotive Top Coat 275 / Permacron Automotive Top Coat 257 / Permacron MS Automotive Top Coat 730

Permahyd Hi-TEC Base Coat 480 / Permahyd Base Coat 280/285/286 + Clearcoat

VOC compliant

2004/42/IIB(C)(540) 540: The EU limit value for this product (product category: IIB(C)) in ready to use form is maximum 540 g/l of VOC. The VOC content of this product in ready to use form is maximum 540 g/l.

Permasolid® HS Vario Surfacer 8590

Product preparation - application STANDARD SANDING HS



It is strongly recommended to use appropriate personal protection equipment during application to avoid respiratory, skin and eye irritation.



OEM Primer (e-coat), finely sanded or unsanded and thoroughly cleaned. Remark: due to the wide variety of electrocoats present on the market, its quality can differ a lot. For this reason preferably scuff sand the e-coat

Old or original paintwork well sanded and cleaned.

Steel, galvanised steel or soft aluminium, sanded and cleaned and coated with Wash Primer

Surfaces pretreated with 2K polyester products and then finely sanded and cleaned

Glass fibre reinforced polyester substrates, free of release agents, sanded and cleaned.



Surfacer		Hardener		Reducer	
Volume	Weight	Volume	Weight	Volume	Weight
3	100	1	21	10 - 15 %	7 - 10
8590		3309 FAST 3310 3312 SLOW 3315 EXTRA SLOW		3364 3365 SLOW 3380 3385 SLOW 8580	



Pot life at 20°C: 30 min - 1 hr



	Spray nozzle	Spray pressure	
Compliant	1.4 - 1.8	1.5 - 2 bar	inlet pressure
HVLP	1.7 - 1.9	0.7 bar	atomisation pressure

see manufacturer's instructions



2 - 3 coats

intermediate and final flash-off: 5 min - 10 min



	3309 FAST / 3310 / 3312 SLOW / 3315 EXTRA SLOW
20 °C	12 hr - 16 hr
60 - 65 °C	25 min - 40 min



Guideline for short wave IR equipment

Half power: 2 min

Full power: 8 min



P400 - P600



Permasolid HS Automotive Top Coat 275 / Permacron Automotive Top Coat 257 / Permacron MS Automotive Top Coat 730

Permahyd Hi-TEC Base Coat 480 / Permahyd Base Coat 280/285/286 + Clearcoat

VOC compliant

2004/42/IIB(C)(540) 540: The EU limit value for this product (product category: IIB(C)) in ready to use form is maximum 540 g/l of VOC. The VOC content of this product in ready to use form is maximum 540 g/l.

Permasolid® HS Vario Surfacer 8590

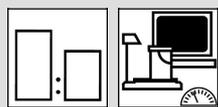
Products

Permasolid® HS Vario Surfacer 8590

Permasolid® HS Hardener 3309 fast
 Permasolid® HS Hardener 3310
 Permasolid® HS Hardener 3312 slow
 Permasolid® HS Hardener 3315 extra slow
 Permasolid® VHS Hardener 3225
 Permasolid® VHS Hardener 3230 slow
 Permasolid® VHS Hardener 3240 extra slow

Permacron® MS Duraplast 8580
 Permacron® Reducer 3364
 Permacron® Reducer 3365 slow
 Permacron® Reducer 3380
 Permacron® Reducer 3385 slow

Product mix



Mixing ratios with special agents are available in the productmix table on Phoenix and in the specific TDS. The choice of hardener and Reducer should be made according to application temperature and size of repair.

3225	Medium hardener for panel and multi panel repairs. Providing excellent through curing and recommended at a temperature range of 20-25°C.
3230	Slow hardener suitable for horizontal applications and multiple up to full resprays mainly at temperature range of 20-30°C.
3240	Extra slow hardener for horizontal application and multiple panels up to full resprays. Ensures very good overspray absorption and application properties. Mainly to be used at temperature range of 25-40°C.
3309	Fast hardener for panel and multi panel repairs. Mainly used at temperature range of 15-25°C.
3310	Medium hardener suitable for panel and multi panel repairs. Providing excellent through curing and mainly to be used at temperature range of 20-30°C.
3312	Slow hardener suitable for horizontal applications and multiple panels up to full resprays. Recommended also for warm conditions at 25-35°C.
3315	Extra slow hardener for horizontal application and multiple panels up to full resprays. Ensures very good overspray absorption and application properties. Mainly to be used at temperature range of 30-40°C.
3364	Medium thinner suitable for partial up to full resprays. Mainly used at temperature range of 20-30°C.
3365	Slow thinner suitable for medium to large size repairs. Recommended also for warm conditions at 25-35°C.
3380	Medium thinner suitable for panel, multi panel and large size repairs. Mainly used at temperature range of 15-30°C.
3385	Slow thinner for multiple panels up to full resprays. Mainly to be used at higher temperatures of 30-40°C.
8580	Accelerated fast thinner suitable for Speed Repair and panel repairs. Recommended for cooler application conditions.

Permasolid® HS Vario Surfacer 8590

	<p>20 - 30 µm non-sanding 50 - 120 µm sanding 60 - 100 µm isolating</p>
<p>Theoretical coverage</p>	<p>380 - 450 m²/l at 1 micron dry film thickness Due to different hardener characteristics and different mixing ratios of the ready-to-use mixture in some TDS versions, the theoretical coverage calculation may vary. Note: The practical material consumption depends on several factors, e.g. geometry of the object, surface formation, application method, spray gun setting, inlet pressure, etc.</p>
	<p>Clean after use with a suitable solventbased guncleaner.</p>

Remarks

- Material has to be at room temperature (18-25°C) before use.
- Allow additional time for preheating up to panel temperature.
- Surplus ready for use material should not be returned to original can.
- Surfacer is tintable up to 10% with Permasolid HS Automotive Top Coat 275 or 15% Permacron Automotive Top Coat 257. Drying and sanding can be affected.
- For plastic substrates, 15% of Permasolid Elastic Additive 9050 needs to be added to the surfacer. Mixing ratio will change: VHS hardener - 3:1 with 20% reducer, HS hardener - 2:1 with 20% reducer. Allow the elastified surfacer to flash-off for 30 - 45 minutes before base coat / top coat application.
- For countries outside the EU or usage other than vehicle refinishing: As an alternative, Permacron Base Coat 293/295/297 or Permacron MS Top Coat 730/Top Coat 257 can be used if not banned by the VOC Directive 2004/42/EC and if available.

Consult Safety Data Sheet prior to use. Observe the precautionary notices displayed on the container.

All other products referred to in the refinish build up are from our Spies Hecker product range. System properties will not be valid when the related material is used in combination with any other materials or additives which are not part of our Spies Hecker product range, unless explicitly indicated otherwise.

For professional use only! The information provided in this documentation has been carefully selected and arranged by us. It is based upon our best knowledge on the subject at the date of issuance. The Information is given for information purposes only. We are not liable for its correctness, accuracy and completeness. It is up to the user to check the information with regard to up-to-dateness and suitability for his intended purpose. The intellectual property in this Information, including patents, trademarks and copyrights, is protected. All rights reserved. The relevant Material Safety Data Sheet and Warnings displayed on the product label need to be observed. We may modify and/ or discontinue operation of all or portions of this Information at any time in our sole discretion, without notice and assume no responsibility to update the Information. All rules set forth in this clause shall apply accordingly for any future changes and amendments.