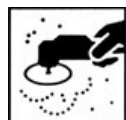


VSS-303/304 SURFACER SEALER LV – as a surfacer

Valorem VSS-303/304 Surfacers Sealer LV (low VOC) is a high-solids urethane surfacer and sealer. Depending on the mixing ratio used, VSS Surfacers Sealer LV can be either used as a high build sanding surfacer or wet-on-wet primer sealer. VSS Surfacers Sealer LV is available in white and black which may be intermixed for fast topcoat coverage and versatility. VSS Surfacers Sealer LV provides a smooth and stable substrate, with exceptional coverage and holdout, for a first-rate refinish appearance.

**SAFETY CONSIDERATIONS**

- Use suitable personal protection.
- When exposed to paint or solvents AkzoNobel recommends the use of a fresh air supply respirator.

**SURFACE ABRADING**

- Existing Finishes – #P320 to #P400 sandpaper, dry.
- Bare Steel – #P80 then #P120 sandpaper, dry.
 - ✓ Optimal adhesion to bare metal is achieved through pretreatment. See the Surface Preparation section of the TDS for details.

**SURFACE CLEANING**

- Use suitable surface cleaners and technique to ensure a clean surface

**MIXING – BY VOLUME**

Mix	Standard Mix
4	Parts VSS-303/304 Surfacers Sealer LV
1	Part VH-305LV Surfacers Sealer Hardener LV
1	Part Surfacers Sealer LV Activator (VR-370LV or VR-380LV)

BY VOLUME

**EQUIPMENT****Spray-Gun Set-Up:**

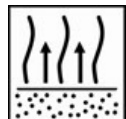
- 1.7 – 2.0 mm HVLP Gravity
- 1.7 – 2.0 mm Compliant Gravity

Application Air Pressure:

- HVLP – 10 psi (<0.7 bar) at cap maximum
- Consult manufacturer specifications

**APPLICATION**

- Apply 2 – 3 single (medium-wet) coats
 - Flash dry between coats

**FLASH OFF****Flash at 70°F (21°C) Between Coats**

- 5 – 10 minutes

Flash at 70°F (21°C) Before Force Dry

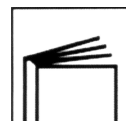
- 5 – 10 minutes

**DRYING****Drying at 70°F (21°C)**

- 3 hours (3 coats)

Force Dry Curing

- 30 minutes at 140°F (60°C)
- Shortwave IR: 5 min. low *-then-* 5 min. high

**RECOATING**

- All Valorem primer sealers
- All Valorem basecoats and topcoats
 - For sanding instructions, refer to the technical data sheet of the product to be applied

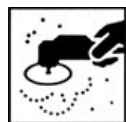
Read the complete TDS and the product Safety Data Sheet (SDS) for detailed product information

VSS-303/304 SURFACER SEALER LV – as a sealer

Valorem VSS-303/304 Surfacers Sealer LV (low VOC) is a high-solids urethane surfacer and sealer. Depending on the mixing ratio used, VSS Surfacers Sealer LV can be either used as a high build sanding surfacer or wet-on-wet primer sealer. VSS Surfacers Sealer LV is available in white and black which may be intermixed for fast topcoat coverage and versatility. VSS Surfacers Sealer LV provides a smooth and stable substrate, with exceptional coverage and holdout, for a first-rate refinish appearance.

**SAFETY CONSIDERATIONS**

- Use suitable personal protection.
- When exposed to paint or solvents AkzoNobel recommends the use of a fresh air supply respirator.

**SURFACE ABRADING**

- Existing Finishes – #P320 to #P400 sandpaper, dry.
- Bare Steel – #P80 then #P120 sandpaper, dry.
 - ✓ Optimal adhesion to bare metal is achieved through pretreatment. See the Surface Preparation section of the TDS for details.

**SURFACE CLEANING**

- Use suitable surface cleaners and technique to ensure a clean surface



BY VOLUME

MIXING – BY VOLUME

Mix	Standard Mix
3	Parts VSS-303/304 Surfacers Sealer LV
1	Part VH-305LV Surfacers Sealer Hardener LV
1	Part VR-380 Surfacers Sealer LV Slow Activator

**EQUIPMENT****Spray-Gun Set-Up:**

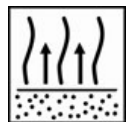
- 1.3 – 1.5 mm HVLP Gravity
- 1.3 – 1.5 mm Compliant Gravity

Application Air Pressure:

- HVLP – 10 psi (<0.7 bar) at cap maximum
- Consult manufacturer specifications

**APPLICATION**

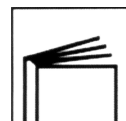
- Apply 1 thin, flowing coat over the desired area.
 - On areas that have been sanded through, apply one thin coat and allow 5-10 minutes at 70°F (21°C) followed by a wet coat of sealer.

**FLASH OFF****Flash at 70°F (21°C) Before Topcoat**

- 15 minutes

Maximum Recoat Time at 70°F (21°C)

- Maximum of 4 hours.

**RECOATING**

- Once flashed, VSS-303/304 Surfacers Sealer LV as a sealer may be recoated with Valorem basecoats and topcoats.

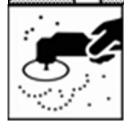
Read the complete TDS and the product Safety Data Sheet (SDS) for detailed product information

VSS-303LV/304LV SURFACER SEALER LV**DESCRIPTION**

Valorem VSS-303/304 Surfacer Sealer LV (low VOC) is a high-solids urethane surfacer and sealer. Depending on the mixing ratio used, VSS-303/304 Surfacer Sealer LV can be either used as a high build sanding surfacer or wet-on-wet primer sealer. VSS-303/304 Surfacer Sealer LV is available in white and black which may be intermixed for fast topcoat coverage and versatility. VSS-303/304 Surfacer Sealer LV provides a smooth and stable substrate, with exceptional coverage and holdout, for a first-rate refinish appearance.

**PRODUCT ASSORTMENT**

- Valorem VSS-303LV Surfacer Sealer LV (Black) – Item# 596184 (Gallon)
 - Valorem VSS-304LV Surfacer Sealer LV (White) – Item# 596185 (Gallon)
 - Valorem VH-305LV Surfacer Sealer Hardener LV – Item# 596225 (Quart)
 - Valorem VR-370LV Surfacer Sealer LV Fast Activator – Item# 596224 (Quart)
 - Valorem VR-380LV Surfacer Sealer LV Slow Activator – Item# 596183 (Quart)
 - Valorem VX-700 Accelerator – Item# 595118 (250 ml)
 - Valorem VX-600 Flex Additive – Item# 595119 (Quart)
- Stock unopened or used products in approved closed containers with proper labeling. Store in moderate temperatures. Optimum storage temperature is approximately 70°F (21°C). Avoid too much temperature fluctuation. The maximum temperature range for storage is 40°F - 95°F (5°C – 35°C).
 - Refer to the Product Shelf Life Overview TDS or the current price list for the most up-to-date shelf-life information.

**SURFACE PREPARATION****Pre-Cleaning**

- If needed pre-wash the repair with warm soap and water. Rinse completely with clean water.
- Clean with suitable surface cleaners using appropriate techniques to ensure a clean and contaminant-free surface.

Substrate Type	For Surfacer		For Sealer
	Dry Sanding	Dry Sanding	Wet Sanding
Existing Finishes	#P220 to #P360	#P320 – #P400	#P500 – #P600
OEM E-Coat	Not Required	Not Required	Not Required
Steel	#P80 then #P120	#P80 then #P120	N / A
Galvanized Steel	#P120 to #P180	#P120 – #P180	N / A
Aluminum	#P180 or Red Pad	#P180 or Red Pad	N / A
Polyester Bodyfiller	#P180 to #P220	N / A	N / A
Gelcoat	#P220 to #P360	#P320 – #P400	#P500 – #P600
Polyolefin Plastic	#P320 to #P400	#P400	#P500 – #P600
Non-Polyolefin Plastic	#P320 to #P400	#P320 – #P400	#P500 – #P600

- Valorem VSS-303/304 Surfacer Sealer LV will provide adequate adhesion on small bare metal areas. Repairs that require extensive metal priming such as panels that have had the existing paint system removed require VPT-24 Pre-Treatment Cut Thru Wipe application prior to coating with VSS-303/304 Surfacer Sealer LV.
- Polyolefin plastics require a pre-treatment adhesion promoter. Prime polyolefin plastics with Valorem VPP-50 Plastic Primer prior to the application of flexed VSS-303/304 Surfacer Sealer LV. Refer to the VPP-50 Plastic Primer Technical Data Sheet.

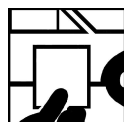
Surface Cleaning – Prior to Paint Application

- Use suitable surface cleaners and technique to ensure a clean and contaminant-free surface.



VSS-303LV/304LV SURFACER SEALER LV**MIXING COLOR FORMULAS AND PRODUCTS****Formulas**

- VSS-303/304 Surfacer Sealer LV Black and White can be intermixed in any ratio necessary to create the desired shade of gray.
- For easy mixing of color formulas or products, final mixing including hardening, reduction, and the addition of additives, can be done through the MIXIT system.



Shade	Ratio	Gray shade
White	White (100%)	EGS-100
Light Gray	White 75% / Black 25%	EGS-150
Gray	White 50% / Black 50%	EGS-200
Dark Grey	White 25% / Black 75%	EGS-250
Black	Black (100%)	EGS-300

Hand Mixing Colors

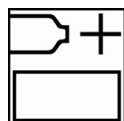
- Colors can be custom mixed to create any shade of gray needed. If white is desired, add a small amount of black to 100% white for increased hiding.



BY VOLUME

MIXING – SURFACER**Mix**

- 4 Parts VSS-303/304 Surfacer Sealer LV
 1 Part VH-305 Surfacer Sealer Hardener LV
 1 Part VSS Surfacer Sealer LV Activator (VR-370LV or VR-380LV)

**Mix Adding Accelerator to Surfacer**

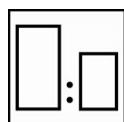
- To 1 quart of ready to spray surfacer, stir in one of the following:
 1/8 - 1/4 oz. Valorem VX-700 Accelerator



BY VOLUME

MIXING – PRIMER SEALER**Mix****Standard Mix**

- 3 Parts VSS-303/304 Surfacer Sealer LV
 1 Part VH-305 Surfacer Sealer Hardener LV
 1 Part VR-380 Surfacer Sealer LV Slow Activator



BY VOLUME

MIXING – FLEXIBLE PARTS

If the part can be deformed by hand, increase the flexibility of VSS-303/304 Surfacer Sealer LV as follows:

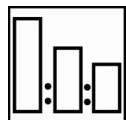
Step #1 – Mix:

- 100 Parts by volume VSS-303/304 Surfacer Sealer LV
 15 Parts by volume VX-600 Flex Additive

- ✓ A mixture of 3:1 should be used for soft parts.

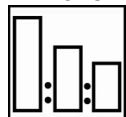
Stir the paint and Flex Additive mixture together. Then, Step #2 mix:

<continued on next page>

VSS-303LV/304LV SURFACER SEALER LV

BY VOLUME

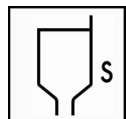
- Surfacer Mix:**
- 4 Parts VSS-303/304 Surfacer Sealer LV / Flex Additive mixture (**From Step #1**)
 - 1 Parts VH-305 Surfacer Sealer Hardener LV
 - 1 Parts VSS Surfacer Sealer LV Activator (VR-370LV or VR-380LV)



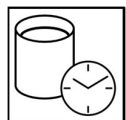
BY VOLUME

- Sealer Mix:**
- 3 Parts VSS-303/304 Surfacer Sealer LV / Flex Additive mixture (**From Step #1**)
 - 1 Parts VH-305 Surfacer Sealer Hardener LV
 - 1 Parts VR-380 Surfacer Sealer LV Slow Activator

✓ Recommended mixture when painting aftermarket plastic bumpers

**VISCOSITY – READY TO SPRAY****DIN #4 at 70°F (21°C)**

- VSS-303/304 Surfacer Sealer LV Surfacer – 18 – 22 seconds
– Sanding mix
- VSS-303/304 Surfacer Sealer LV Sealer – 13 – 16 seconds
– Non-sanding mix

**POT-LIFE WHEN MIXED**

Product Mix	70°F (21°C)
• VSS-303/304 Surfacer Sealer LV Surfacer	50-60 min.
• VSS-303/304 Surfacer Sealer LV Surfacer (Accelerated)	25-30 min.
• VSS-303/304 Surfacer Sealer LV Sealer 3:1:1	60-90 min.

**SPRAY GUN SET-UP****HVLP or Compliant Spray Gun Setup****Application Air Pressure**

- Surfacer: 1.7 – 2.0 mm
- Sealer: 1.3 – 1.5 mm
- HVLP – 10 psi (<0.7 bar) at cap maximum.
- Consult manufacturer specifications.

**APPLICATION****Primer Surfacer**

- Apply 2-3 single wet coats. For use on repair (polyester bodyfiller) or sanded areas apply one coat over the repair, and then after a flash dry apply the second and third coats.
 - Flash off between the coats until the surface becomes totally matt (about 5-10 minutes), this will depend on ambient temperature, applied thickness/wetness and airflow.

Primer Sealer

- Apply 1 thin, flowing coat over the desired area.
 - Over any sand through areas, first apply a thin coat to make all the substrate layers uniform before continuing with a normal coat.

VSS-303LV/304LV SURFACER SEALER LV**DRYING/CURING TIME – PRIMER SURFACER****Primer Surfacer Air Dry**

- 3 hours at 70°F (21°C)
- 2 hours at 70°F (21°C) when mixed with Accelerator.

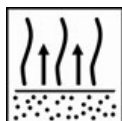
Primer Surfacer Force Dry

- 30 Minutes at 140°F (60°C)
- 20 Minutes at 140°F (60°C) when mixed with Accelerator.

Primer Surfacer Infrared Shortwave Curing

Drying / Curing with short wave light IR equipment and a surface distance of 20 – 27 inches (50 – 70cm). The object temperature must not reach a temperature above 212°F (100°C).

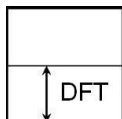
- Allow 3 to 5 minutes flash off before infrared curing
- Cure 5 minutes on low power followed directly by a 5-minute full power cure.
 - ✓ Times stated are based on following the recommended application method, film thickness, and object temperature.

**DRYING FLASH TIME – PRIMER SEALER**

- Prior to topcoating sealer, allow a minimum flash off time of 15 minutes at 70°F (21°C).
 - Maximum recoat time is 4 hours 70°F (21°C).
 - ✓ If the maximum flash time is exceeded, VSS-303/304 as a sealer must be sanded prior to topcoat application. Follow the sanding recommendations for the product to be applied before continuing with the application of the desired Valorem paint system.

**RECOATING**

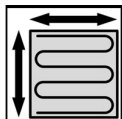
- VSS-303/304 Surfacers Sealer LV can be recoated with all Valorem surfacers, sealers, and topcoats.
 - Refer to the technical data sheet for the product you will be applying for information.

**FILM THICKNESS – USING SUITABLE APPLICATION****Primer Surfacer**

- 1 Coat will achieve a thickness of 1.5 – 2.0 mils (37 - 50µm).

Primer Sealer

1 Coat will achieve a thickness of 0.8 – 1.2 mils (20 – 30µm).

**THEORETICAL COVERAGE**

Actual coverage is dependent on many factors. These may include: the shape of the object, surface smoothness, application technique and other application variables among others.

Ready to Spray –

- VSS-303LV / 304LV – Surfacers – ≈600-625 ft²/gal
- VSS-303LV / 304LV – Sealer – ≈730-740 ft²/gal

VSS-303LV/304LV SURFACER SEALER LV**VOC / REGULATORY INFORMATION**

Notice: Do not handle until the Safety Data Sheets have been read and understood. Regulations require that all employees be trained on Safety Data Sheets for all chemicals with which they come in contact. The manufacturer recommends the use of an air-supplied respirator when exposed to vapors or spray mist.

Valorem VSS-303/304 Surfacer Sealer LV Ready to spray VOC:

- Valorem VSS-303/304 Surfacer Sealer LV Surfacer (4:1:1) – ≤2.1 lbs./gal (250 g/L)
- Valorem VSS-303/304 Surfacer Sealer LV Sealer (3:1:1) – ≤2.1 lbs./gal (250 g/L)

AkzoNobel Inc., North America
Address: 1845 Maxwell Street – Troy, MI USA
Tel: 800.618.1010

FOR PROFESSIONAL USE WITH SUITABLE HSE EQUIPMENT

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Safety Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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Head Office

AkzoNobel Car Refinishes B.V., PO Box 3, 2170 BA Sassenheim, The Netherlands