



# PRODUCT DATA

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## CONVERSION VARNISH CLEAR AND PIGMENTED FINISHES “SOLVENT BASE”

PRODUCT CODE:

103 – 2XX

PRODUCT DESCRIPTION:

Conversion Varnish Clear and Pigmented Finishes are low V.O.C., Catalyzed, self-sealing Wood Finishing Systems that exceed the rigid performance standards of the Kitchen Cabinet Manufacturers Association (K.C.M.A.). They are specifically formulated with superior performing properties that provide excellent hi build and dries to hard shell finishes for mar/abrasion, and chemical resistance. The Clear Conversion Varnishes are true crystal clear “Water White “ Finishes. **(color clarity that is non-amber)** Using these products in tandem with Simpson Coatings Non-Stearated Clear Vinyl Sanding Sealer #103-111C or Single Component Vinyl Sealer #103-881, clearly provides the ultimate Moisture Resistant Wood Cabinet/Furniture Finishing System that is exceptional in **protection/resistance against harsh chemicals/solvents, abrasion and alkali.**

INTENDED USE:

These pro-efficient, fast drying finishes are specifically designed to meet the durability finishing demands of the **Institutional, Office Furniture, Cabinets/Fine Furniture, and High End Interior Wood Finishers Markets.** The many application advantages such as: **non-blushing, high solids for build, excellent hang on vertical surfaces,** make these products the ideal durable finish for **Kitchen/Bathroom Cabinets, Vanities, Commercial Office/Restaurant Furniture, Fine Bedroom/Dining Furniture, Bar Tops, Decorative Wood Trim and Molding.** The Clear “Water White” Conversion Varnish Finishes are the best **Top Line Clear Finish** that can be applied over **Whites and Light Pastels, Natural/Lightly Toned Wood Substrates** or anywhere a **hard durable finish with true “Water White” color clarity is required.** Clear and Pigmented Conversion Varnish Finishes are available in four different sheens and are packaged in five gallon and one gallon containers.

NOTE:

Simpson Coatings CAB Acrylic Clear Lacquers are Self-Sealing Finishes and are not recommended for use over Conventional Stearated Sanding Sealer/Finishes.

### CLEAR CONVERSION VARNISH FINISHES

103 – 200  
Catalyst

103 – 212  
Gloss

103 – 213  
Semi-Gloss

103 – 217  
Satin

103 – 214  
Flat

### PIGMENTED CONVERSION VARNISH FINISHES

103 – 200  
Catalyst

103 – 221  
Gloss White

103 – 223  
Semi-Gloss White

103 – 227  
Satin White

103 – 224  
Flat White

LIMITED WARRANTY: The statements on this bulletin product label, or by any of our agents concerning these materials are given for information only. They are believed to be true and accurate and intended to provide a guide to approved construction practices and materials. As workmanship, weather, construction equipment, quality of other materials and other variables affecting results are all beyond our control. The Simpson Coatings Group does not make nor does it authorize any agent or representative to make any warranty of MERCHANTABILITY OR Fitness for any purpose or any other warranty, guarantee or representation, expressed or implied, concerning this material except that it conforms to Simpson Coatings quality control standards. Any liability whatsoever of Simpson Coatings Group to the buyer or user of this product is limited to the purchaser's cost of the product itself.

## SURFACE PREPARATION

### WARNING!

If you scrape, sand, or remove **Old Paint**, you may release **Lead Dust**. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.** Wear a NIOSH-Approved Respirator to control Lead Exposure. Clean up carefully with a HEPA Vacuum and Wet Mop. Before you start, find out how to protect yourself and your family by contacting The National Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

- ALL SURFACES:** Must be clean, dry and free of dust, dirt, oil, grease, wax or any contamination that would adversely affect the adhesion or performance of this coating. Remove all oil, dirt, and other contaminants by cleaning with a V.O.C. compliant commercial cleaner/degreaser. Rinse thoroughly and allow the surface to completely dry.
- ALL MILDEWED SURFACES:** Existing mildew should be removed by washing the affected areas with a 3:1 solution of water and chlorine bleach or reliable commercial mildewcide. Keep applying until all discoloration is removed. Rinse thoroughly and allow surface to dry before applying the Sanding Sealers/Finishes.
- NEW WOOD SURFACES:** Where appropriate, sand the surface smoothly with 180 grit or finer sandpaper prior to staining or sealing. Dust and sand residue should be removed with a **clean cotton cloth or vacuumed prior** to coating with Simpson Coatings Stains/Woodtone Sealers or Vinyl Sanding Sealers. **Do not use tack rags to remove dust and sand residue from the substrate.** Apply one coat of Simpson Coatings Stains without thinning, allowing the surface setting time for the Stain/Woodtone Sealer to uniformly develop itself. Allow 30 to 45 minutes drying time before applying the Simpson Coatings Clear and Pigmented Conversion Varnishes #103-2XX. Apply one wet cross coat of the Conversion Varnish or Vinyl Sanding Sealer as a seal coat allowing 30 to 60 minutes dry time between each coat.

**NOTE:** For those wood substrates that are more opened grain in texture, have soft grain porosity or for increasing moisture resistance in the finish, it is recommended to apply a minimum one coat of Simpson Coatings Vinyl Sanding Sealer #103-111A, catalyzed, (4oz. of Vinyl Sanding Sealer Catalyst #103-111B to one gallon of Vinyl Sanding Sealer #103-111A) or the Single Component 550 Vinyl Sanding Sealer #103-881 as a seal coat, allowing 30 to 60 minutes dry time prior to sanding.

## PREVIOUSLY COATED SURFACES

### ALL PREVIOUSLY COATED SURFACES:

Clean thoroughly as directed for all surfaces. Remove all loose peeling coatings and chalk oxidation by sanding or pressure washing. All substrate surfaces that have sheen should be sanded to a dull finish to insure maximum adhesion. All previously coated surfaces must be coated with a **Non-Stearated Clear Sanding Sealer for those surfaces that will be coated with the Clear Conversion Varnishes i.e., (#103-111C Clear Vinyl Sanding Sealer, #103-881 550 V.O.C. Single Component Clear Vinyl Sanding Sealer, or #102-440 Non-Stearated 550 Clear Nitrocellulose Sanding Sealer).** The #102-470 550 Non-Stearated White Lacquer Undercoat should be used on previously coated surfaces that will be finish coated with the Pigmented Conversion Varnishes. A test patch of these products over the previous coating is recommended. If lifting or wrinkling occurs, refrain from using these finishing systems. Surfaces requiring complete restoration must have the finish removed by either power sanding or the use of a paint/varnish remover, then treated as new surfaces.

### PREVIOUSLY COATED WOOD SURFACES:

Clean thoroughly as directed above for previously coated surfaces.

## 103 – 2XX Clear and Pigmented Conversion Varnishes continued . . .

### APPLICATION

Estimation of practical coverage of this product can be variable and is completely dependent on application technique i.e., (determine amount of wet film thickness application to achieve dry film thickness) and the porosity of the substrate.

Drying time and curing time can be adversely affected by extreme high/low substrate and atmospheric temperature variances, along with extreme high/low humidity. Apply when **air, product and surface temperatures** are between **60 °F – 90 °F**, the relative humidity is no greater than **85%**, and surface is at least **5 °F** above the dew point.

**Caution:** These Conversion Varnish Products are formulated with Formaldehyde. Properly fitted Respirators (NIOSH/MSHA APPROVED) and Applicators Protective Clothing should be worn at all times during application.

**Mixing Instructions:** Stir together one gallon of the conversion Varnish Finish #103–2XX with four fluid ounces of Conversion Varnish Catalyst #103–200. Mix only enough product to be used in a **pot life @ 80 °F for 24 hours, 100 °F for 6 hours. DO NOT USE OTHER MANUFACTURERS CONVERTERS/CATALYST WITH THE SIMPSON COATINGS CONVERSION VARNISH FINISHES #103–XXX!**

**Do not shake or agitate the container.** This will create excessive air entrapment in the coating material resulting in a propensity to blister and pinhole. **STIR** the product thoroughly before and during application, keeping the product dispersed for uniform consistency in the finish coat.

**Simpson Coatings Clear Conversion Varnishes are designed for use over Simpson Coatings Stains/Wood Tone Sealers. If other manufacturer's conventional oil stains or other type of stains, glazes, toners are used, they all must be thoroughly dry/cured per the manufacturer's recommendation before applying the Clear Conversion Varnishes.**

**All spray equipment must be flushed out prior to applying the Conversion Varnish Finishes with the Simpson Coatings Conversion Varnish Reducer #301–017, to remove any contaminants that would adversely affect the performance of these products. EXCEPT AS RESTRICTED BY YOUR LOCAL AIR QUALITY MANAGEMENT DISTRICT.**

**Please Note:** **DO NOT EXCEED 2 coats of the Conversion Varnish Finish @ 2.6 to 3.9 mils wet to achieve 1.0 to 1.5 mils dry film thickness over one seal coat.**

**WOOD SURFACES:** Apply Simpson Coatings Clear and Pigmented Conversion Varnish Finishes with Professional Airless, Conventional or HVLP Spray Technology. Apply one coat Simpson Coatings Clear and Pigmented Conversion Varnish Finishes #103–2XX as a seal coat at 2.6 to 3.9 mils wet to achieve 1.0 to 1.5 mils dry film thickness, allowing 30 to 60 minutes dry time to sand/recoat. Inspect surface for any raised fibers or imperfections. Sand lightly any imperfect areas. **Recoat windows for the Conversion Varnish Finish is within 1-hour dry time or after 8 hours dry time.** Apply second coat allowing 10 to 12 hours dry time for light traffic use, a full 24 to 48 hours cure time for moderate traffic, a full 7 to 10 day cure time for heavy traffic use.

## 103 – 2XX Clear and Pigmented Conversion Varnishes continued . . . .

### APPLICATION continued . . . .

#### PREVIOUSLY COATED SURFACES:

As directed in surface preparation, a test patch of the Conversion Varnish Finishes is recommended. If no lifting occurs, apply two coats of the Conversion Varnish Finishes #103–2XX at 1.0 to 1.5 mils dry film thickness. Allow 30 to 60 minutes dry time to sand/recoat. A 10 to 12 hour dry time must be allowed for light traffic use, a full 24 to 48 hour dry/cure time is required for moderate traffic, a full 7 to 10 day dry time for heavy traffic use.

### THINNING/CLEAN – UP

#### AIR ATOMIZED/AIRLESS SPRAY:

***DO NOT THIN THESE PRODUCTS. These products are ready-to-apply as packaged.*** Thinning these products can adversely affect film building properties, dry/cure times, and volatile organic compound (V.O.C.) emissions. Please review the U.S. E.P.A. National Rule and your Local Air Quality Management Districts Rules and Regulations regarding V.O.C. emissions and Clean Up Products Regulations for Architectural and Industrial Maintenance Coatings.

#### CLEAN – UP:

Use Simpson Coatings Acetone #304–013 for cleaning Application Tools and Spray Equipment only! **EXCEPT AS RESTRICTED BY YOUR LOCAL AIR QUALITY MANAGEMENT DISTRICT.**

### EQUIPMENT RECOMMENDATIONS

#### BRUSH/ROLLER:

Not recommended/Spray Application only!

#### SPRAY:

Clear And Pigmented Conversion Varnish Finishes can be applied by Professional Airless, Conventional or HVLP Spray Technology.

#### Please Note:

All applicators should refer to Spray Equipment Suppliers and Manufacturers recommendations for Fine Finishing Spray Guns, Caps, Tips and Fluid Needles. **HOT SPRAY OR HEAT INDUCED SPRAY APPLICATION IS NOT RECOMMENDED.** Simpson Coatings Conversion Varnish Catalyst #103–200 is an acid catalyst. To prevent acid corrosion and/or pitting; it is recommended that all equipment, containers and piping should be made of stainless steel. Acid reacting with iron or steel fixtures will cause a discoloration of the Conversion Varnish.

# 103-2XX Conversion Varnish Clear and Pigmented Finishes "Solvent Base" Technical Data/Physical Properties

**Resin Type:** Alkyd Urea Varnish  
**Solvents:** Alcohols, Acetates, Formaldehyde, Glycol Ether, Ketones & Xylene  
**Coatings V.O.C. < 530 G/L**

PRODUCT	ANALYSIS					PRODUCT COVERAGE			
	Pigment % by weight	% Solids by weight	% Solids by volume	Gloss	Viscosity	Wt. Per Gallon	Recommended Dry Film Thickness	Recommended Wet Film Thickness	Practical Coverage (assume 15% material loss)
103-212 Clear Gloss Conversion Varnish	41.5-43.5%	33.0-35.0%	80+	24-30 Sec #2 Zahn	7.7-8.3	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.
103-213 Clear Semi-Gloss Conversion Varnish	42.0-44.0%	33.4-35.4%	40-60	24-30 Sec #2 Zahn	7.8-8.4	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.
103-214 Clear Flat Conversion Varnish	42.1-44.1%	33.3-35.3%	15 Max	24-30 Sec #2 Zahn	7.8-8.4	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.
103-217 Clear Satin Conversion Varnish	42.0-44.0%	33.3-35.3%	21-27	24-30 Sec #2 Zahn	7.8-8.4	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.

**Dry times @ 77° F and 50% R.H.**

Tack Free: 15-20 Minutes

Handle: 20-30 Minutes

Sand/Recoat: 30-60 Minutes- Recoat Windows are 1 Hour or after 8 Hours

Dry/Cure: 24-48 Hours

Full Hardness: 7-10 Days

**Special instructions: Do not apply more than 2 coats over the seal coat or cracking may occur. Pot Life: 24 Hours @ 80°F, 6 Hours @ 100 °F**

**Proposition 65 Warning**

**WARNING: THIS PRODUCTS CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.**

**TECHNICAL SERVICE:** Technical Services are available through Simpson Coatings Technical Service Support at 1-800-877-5997

LIMITED WARRANTY: The statements on this bulletin product label, or by any of our agents concerning these materials are given for information only. They are believed to be true and accurate and intended to provide a guide to approved construction practices and materials. As workmanship, weather, construction equipment, quality of other materials and other variables affecting results are all beyond our control. The Simpson Coatings Group does not make nor does it authorize any agent or representative to make any warranty of MERCHANTABILITY, FITNESS FOR ANY PURPOSE, or NON-INFRINGEMENT, expressed or implied, concerning this material except that it conforms to Simpson Coatings quality control standards. Any liability whatsoever of Simpson Coatings Group shall be limited to the amount of the purchase price of the material.

# 103-2XX Conversion Varnish Clear and Pigmented Finishes "Solvent Base" Technical Data/Physical Properties

**Resin Type:** Alkyd Urea Varnish  
**Solvents:** Alcohols, Acetates, Formaldehyde, Glycol Ether, Ketones & Xylene  
**Coatings V.O.C. < 530 G/L**

PRODUCT	ANALYSIS						PRODUCT COVERAGE			
	Pigment % by weight	% Solids by weight	% Solids by volume	Gloss	Viscosity	Wt. Per Gallon	Recommended Dry Film Thickness	Recommended Wet Film Thickness	Practical Coverage (assume 15% material loss)	Theoretical Coverage @ 1 mil D.F.T.
103-221 Gloss White Conversion Varnish	19.9-20.5%	51.2-53.2%	34.6-36.6%	80+	24-30 Sec #2 Zahn	9.1-9.7	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.
103-223 Semi-Gloss White Conversion Varnish	20.2-20.8%	51.4-53.4%	34.8-36.8%	40-60	24-30 Sec #2 Zahn	9.2-9.8	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.
103-225 Flat White Conversion Varnish	20.6-21.2%	51.6-53.6%	35.0-37.0%	15 Max	24-30 Sec #2 Zahn	9.2-9.8	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.
103-227 Satin White Conversion Varnish	20.4-21.0%	51.5-53.5%	34.9-36.9%	21.27	24-30 Sec #2 Zahn	9.2-9.8	1.0-1.5 mils	2.6-3.9 mils	230-300 sq. ft.	275-325 sq. ft.

**Dry times @ 77° F and 60% R.H.**  
 Full Dry/Cure 24-48 Hours

**Tack Free:** 15-20 Minutes  
 Full Hardness 7-10 Days

**Handle:** 20-30 Minutes

**Sand/Recoat:** 30-60 Minutes-Recoat Windows are 1 Hour or after 8 Hours

**SPECIAL INSTRUCTIONS: DO NOT APPLY MORE THAN 2 COATS OVER THE SEAL COAT OR CRACKING MAY OCCUR. POT LIFE: 24 Hours @80° F, 6 HOURS @ 100° F**  
**Proportion 65 Warning**

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