



VARATHANE® INTERIOR DIAMOND POLYURETHANE WATER BASED

DESCRIPTION AND USES

Varathane Diamond Polyurethane provides protection for your wood that is diamond hard, diamond clear, and diamond beautiful. Varathane Diamond Polyurethane is specifically developed to enhance the natural beauty of wood while providing the best scratch and stain resistance available.

When it comes to polyurethanes, one formula does NOT fit all projects. Only Varathane offers application specific formulations. For wood floors use Varathane Floor Finishes to protect against heavy foot traffic. For Outdoor projects use Varathane Spar Urethane with powerful UV absorbers to guard against sun damage.

Varathane Interior Polyurethane is ideal for all interior stained, bare, or painted projects such as furniture, doors, cabinets, and trim. Over twice as durable as traditional wood finishes, It has the fastest dry time of any oil-based polyurethane and is self leveling to save you time.

PRODUCTS

Type	Satin	Semi-Gloss	Gloss
Spray	200281	200181	200081
Half-Pint	200261	200161	200061
Quart	200241	200141	200041
Gallon	200231	200131	200031
5 Gallon*	200221	200121	200021

*Available as special orders only

RECOMMENDED COMPANION PRODUCTS

Recommended use with Varathane Premium Oil Stains, Gel Stains, and Universal Sanding Sealer.

Varathane Premium Oil Stains are available in 24 colors and 4 different sizes (Trial Packets, Half-Pints, Quarts, & Gallons). Use the Varathane Trial Packets to sample different colors.

Varathane Premium Gel Stains are available in 10 colors and 2 different sizes (Half-Pints & Quarts).

Varathane Premium Sanding Sealer seals woods pores and is easy to sand. It is available in quarts and gallons.

PRODUCT APPLICATION

PREVIOUSLY FINISHED SURFACES

For best adhesion, surfaces must be clean, dry, and free of old finishes, dust, dirt, oils, or foreign matter. Old finishes in poor condition must be removed. Sand to obtain a smooth surface. Do not use steel wool as rust may develop after finish has been applied. Remove all sanding dust using a vacuum or cloth dampened with mineral spirits.

STAINED OR PAINTED WOOD

Follow manufacturer's direction for application of stain or paint. Make certain surface is thoroughly dry before applying Varathane Diamond Polyurethane. Refer to manufacturer's label for dry times. For best results, use Varathane Premium Wood Stains.

UNFINISHED SURFACE PREPARATION

Sand using 150-220 grit sandpaper and remove all sanding dust using a rag dampened with mineral spirits, or vacuum. If a filler or putty is used, make sure that it does not contain wax and allow for enough time to dry thoroughly.

APPLICATION TIPS

Product appears milky when wet but dries to a crystal clear finish. Use adequate ventilation at all times. Do not apply in direct sunlight. Apply only when the air and surface temperatures are above 55°F, and below 90°F. Use care when applying over white or pastel paints or stains as discoloration may occur. To prevent bubbles in the finish, do not over-brush, shake, or apply with a roller. Test Varathane Diamond Polyurethane in an inconspicuous area before beginning.

APPLICATION (Aerosol)

- 1.) Shake can vigorously before and during use.
- 2.) Use a drop cloth or newspapers to protect surrounding areas from spray mist
- 3.) Spray light mist coats, holding can 10-12 inches from surface. Move can with a smooth sweeping motion to avoid runs and sags. Several light coats give a better finish than one heavy coat.
- 4.) Allow finish to dry then re-coat. Dries to the touch in 30 minutes, recoat after 1 hour. For extra smoothness, sand lightly with fine grit (#220) sandpaper before final coat.



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PRODUCT APPLICATION (CONTINUED)

APPLICATION (Aerosol cont.)

- 5.) For maximum durability, a minimum of 4 coats is recommended
- 6.) Clean spray button immediately after use by turning can upside down and pressing spray button for 10 seconds or until only clear gas comes out.

APPLICATION (Brush)

- 1.) Stir thoroughly before and during use. **DO NOT SHAKE**, shaking will create bubbles in the finish.
- 2.) Apply using a good quality, synthetic bristle brush, foam brush, or applicator.
- 3.) Allow finish to dry minimum of 2 hours before re-coating. Lower temperatures and/or higher humidity may cause slower dry times. Re-coat only when previous coats have dried clear and feel hard. (Should no longer feel tacky to the touch.) A powder should develop when lightly sanded. If any coat has dried more than 24 hours, lightly sand before re-coating to avoid brush marks.
- 4.) Apply additional coats following directions above. A minimum of 3 coats is recommended. If grain raise occurs, sand smooth before final coat. Allow finish to dry 24 hours before light use. Wait 3 days before subjecting surface to normal usage.

EQUIPMENT RECOMMENDATIONS

AIR-ATOMIZED SPRAY:

Type of Gun	Fluid Tip	Atomizing Pressure
Standard Compressed Air	1.0-1.3mm (0.039"-0.051")	45-80 p.s.i.
HVLP Turbin	1.0-1.3mm (0.039"-0.051")	10 p.s.i.
HVLP Conversion	1.0-1.3mm (0.039"-0.051")	10 p.s.i. (at the tip)

PRODUCT APPLICATION (CONTINUED)

SPRAY TIPS

*Fluid Tips must be plastic or stainless steel.

CLEANUP

For fast, easy clean-up, use water. Dispose of properly. For guidance on disposal of unused product, contact your local or state government environmental control agency.

DO NOT ALLOW PRODUCT TO FREEZE

PERFORMANCE CHARACTERISTICS

PENCIL HARDNESS

METHOD: D3363
RESULT: 2H

CHEMICAL RESISTANCE KCMA Rating 1-10 10= No defects

Vinegar	10
Lemon juice	10
Grape juice	10
Orange juice	10
Catsup	10
Coffee	10
Olive Oil	10
100 proof alcohol	7 recovers
mustard	9 slight stain
Spic and Span	10

HOFFMAN SCRATCH

Method: D2197
2.1 kilograms to rupture

IMPACT RESISTANCE Direct/Reverse

METHOD: D2794
RESULT: 80/70

TABER ABRASION

METHOD: ASTM D4060
RESULT: Approx. 100 mg loss CS 17 1000g 1000 cycles

GLOSS (60°)

METHOD: D523
RESULT: 25/55/90

TECHNICAL DATA



VARATHANE® INTERIOR DIAMOND POLYURETHANE WATER BASED

PHYSICAL PROPERTIES

		Satin	Semi-Gloss	Gloss
Resin Type		Urethane-Acrylic	Urethane-Acrylic	Urethane-Acrylic
Pigment Type		Silica matting agent	Silica matting agent	None
Solvents		Glycol ethers-water	Glycol ethers-water	Glycol ethers-water
Volatile Organic Compounds*		Less than 275g/l (2.2 lb/gal)	Less than 275g/l (2.2 lb/gal)	Less than 275g/l (2.2 lb/gal)
Weight Per Gallon	Per Gallon	8.3-8.5 lb	8.3-8.5 lb	8.3-8.5 lb
	Per Liter	1.00-1.02 kg	1.00-1.02 kg	1.0-1.02 kg
Solids	By Weight	26.8-28.8%	26.8%-28.8%	26.6-28.6%
	By Volume	25.2-27.2%	25.2-27.2%	25.2-27.2%
Recommended Dry Film Thickness (DFT) Per Coat		0.8 – 1.5 mils (19-38μ)	0.8 – 1.5 mils (19-38μ)	0.8 – 1.5 mils (19-38μ)
Wet Film to Achieve DFT Per Coat		1½ - 3 mils (37.5-75μ)	1½ - 3 mils (37.5-75μ)	1½ - 3 mils (37.5-75μ)
Theoretical Coverage @ 1mil DFT (25μ)		400-435 sq ft/gal (-m ² /l)	400-435 sq ft/gal (-m ² /l)	400-435 sq ft/gal (-m ² /l)
Practical Coverage @ Recommended DFT (Assumes 15% Material Loss)		340-370 sq ft/gal (-m ² /l)	340-370 sq ft/gal (-m ² /l)	340-370 sq ft/gal (-m ² /l)
Dry Times at 70°-80°F (21°-27°C) and 50% Relative Humidity	Tack Free	1 hours	1 hours	1 hours
	Handle	1.5 hours	1.5 hours	1.5 hours
	Recoat	2 hours	2 hours	2 hours
Dry Heat Resistance		212°F (100°C)	212°F (100°C)	212°F (100°C)
Shelf Life		3 years	3 years	3 years
Safety Information	Flash Point	>212°F (100°C) Setaflash	>212°F (100°C) Setaflash	>212°F (100°C) Setaflash
	Contains	No lead has been deliberately added.	No lead has been deliberately added.	No lead has been deliberately added.
	Warning!	CONTAINS: GLYCOL ETHERS, N-METHYL PYROLIDONE WARNING. VAPOR MAY BE HARMFUL IF INHALED. KEEP AWAY FROM OPEN FLAME. HARMFUL IF SWALLOWED. MAY CAUSE EYE AND SKIN IRRITATION. WEAR EYE PROTECTION AND PROTECTIVE CLOTHING. REFER TO MATERIAL SAFETY DATA SHEET FOR ADDITIONAL INFORMATION.		

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