



VARATHANE® PREMIUM DIAMOND WOOD FINISH OUTDOOR - WATER BASED

DESCRIPTION AND USES

Varathane Premium Diamond Outdoor Finish provides the ultimate protection for all your outdoor wood projects in an easy to use, water-based formula. Varathane Premium Diamond Outdoor Finish has been specifically formulated to provide maximum protection against sun, water, weather, sea spray and chemicals, which can take years off the life of your outdoor wood.

When it comes to polyurethanes, one formula does NOT fit all projects. Only Varathane offers application specific formulations. For wood floors use Varathane Premium Diamond Floor Finish to protect against heavy foot traffic. For Interior projects Premium Diamond Wood Finish will enhance the natural beauty of wood while providing the best scratch and stain resistance available.

Varathane Premium Diamond Outdoor Finish is ideal for all types of outdoor projects, from outdoor furniture to doors and window trim. Varathane Premium Diamond Outdoor Finish is crystal clear, offers rugged durability, and provides for easy water clean-up.

PRODUCTS

Type	Satin	Semi-Gloss	Gloss
319g Aerosol	Y250281	Y250181	Y250081
236mL	Y250261	Y250161	Y250061
946mL	Y250241	Y250141	Y250041
3.78L	Y250231	Y250131	Y250031

PRODUCT APPLICATION

PREVIOUSLY FINISHED SURFACES

For best adhesion, surfaces must be clean, dry, and free of wax, grease, oil, shellac, lacquer, mildew, and polishes. Remove wax with wax stripper, shellac with a paint stripper, and mildew with a solution of up to 10% household bleach and tap water. 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 Premium Diamond Outdoor Finish. Refer to manufacturer's label for dry times.

UNFINISHED SURFACE PREPARATION

Sand smooth using 120-150 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 13°C (55°F), and below 32°C (90°F). To prevent bubbles in the finish, do not over-brush, shake, or apply with a roller. Test Varathane Premium Diamond Outdoor Finish in an inconspicuous area before beginning. Testing is particularly important when applying over paints or stains as the appearance of these products may change slightly when a water-based finish is applied.

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 20-30cm (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.



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PRODUCT APPLICATION (CONTINUED)

APPLICATION (Aerosol cont.)

- 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.
- 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 4 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)

SPRAY TIPS

*Fluid Tips must be plastic or stainless steel.

PRODUCT APPLICATION (CONTINUED)

CLEANUP

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

DO NOT ALLOW PRODUCT TO FREEZE

PERFORMANCE CHARACTERISTICS

PENCIL HARDNESS

METHOD: D3363
RESULT: HB

CHEMICAL RESISTANCE KCMA Rating 1-10 10= No defects

Vinegar	9
Lemon juice	10
Grape juice	10
Orange juice	10
Catsup	10
Coffee	10
Olive Oil	10
100 proof alcohol	6 recovers
mustard	6 slight stain
Spic and Span	10

HOFFMAN SCRATCH

Method: D2197
1.8 kilograms to rupture

IMPACT RESISTANCE Direct/Reverse

METHOD: D2794
RESULT: 140/120

TABER ABRASION

METHOD: ASTM D4060
RESULT: Approx. 130 mg loss CS 17 1000g 1000 cycles

GLOSS (60°)

METHOD: D523
RESULT: 25/55/90

TECHNICAL DATA



VARATHANE® PREMIUM DIAMOND WOOD FINISH OUTDOOR - 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 (2.21 lb/gal)	Less than 275g/l (2.21 lb/gal)	Less than 275g/l (2.21 lb/gal)
Weight Per Gallon/Liter	Per Gallon	8.5-8.7 lb	8.5-8.7 lb	8.5-8.7 lb
	Per Liter	1.02-1.04 kg	1.02-1.04 kg	1.02-1.04 kg
Solids	By Weight	26.0-28.0%	26.0%-28.0%	25.7%-27.7%
	By Volume	23.8-25.8%	23.8-25.8%	23.8-25.8%
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)		35.3– 38.6 m ² /L 380 – 415 sq ft/gal	35.3– 38.6 m ² /L 380 – 415 sq ft/gal	35.3– 38.6 m ² /L 380 – 415 sq ft/gal
Practical Coverage @ Recommended DFT (Assumes 15% Material Loss)		29.7 – 32.5 m ² /L 320 – 350 sq ft/gal	29.7 – 32.5 m ² /L 320 – 350 sq ft/gal	29.7 – 32.5 m ² /L 320 – 350 sq ft/gal
Dry Times at 21°-27°C (70°-80°F) 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		100°C (212°F)	100°C (212°F)	100°C (212°F)
Shelf Life		3 years	3 years	3 years
Safety Information	Flash Point	>100°C (212°F) Setaflash	>100°C (212°F) Setaflash	> 100°C (212°F) Setaflash
	Contains	No lead has been deliberately added.	No lead has been deliberately added.	No lead has been deliberately added.
	Warning!	CONTAINS: GLYCOL EHTERS, 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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