



VARATHANE® PREMIUM DIAMOND WOOD FINISH OUTDOOR - OIL BASED

DESCRIPTION AND USES

Varathane Premium Diamond Outdoor Finish provides the ultimate protection for all your outdoor wood projects. Varathane Premium Diamond Outdoor Finish has been specifically formulated to provide the best protection from UV light and weather, 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 Finishes 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 fast drying and provides a warm golden glow that will last for years.

PRODUCTS

Type	Satin	Semi-Gloss	Gloss
236mL	Y9361	Y9461	Y9261
946mL	Y9341	Y9441	Y9241
3.78L	Y9331	Y9431	Y9231

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. Remove all sanding dust using a vacuum or cloth dampened with mineral spirits.

PRODUCT APPLICATION (CONTINUED)

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

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). Slower dry times may result from applications on redwood, cedar, or woods with a high oil content, use of stain or sealer, or periods of high humidity and/or low temperatures. 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. Varathane Premium Diamond Outdoor Finish has a slight amber cast. Do not dilute. Test Varathane Premium Diamond Outdoor Finish in an inconspicuous area. Testing is particularly important when applying over paints or stains as the appearance of these products may change slightly when an oil-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 to 30 cm (10 to 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 2 hours. Dries hard in 4 hours. For extra smoothness, sand lightly with fine grit (#220) sandpaper before final coat.
- 5.) For maximum durability, a minimum of 3 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.



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PRODUCT APPLICATION (CONTINUED)

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, natural bristle brush or applicator.
- 3.) Allow finish to dry minimum of 8 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. 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	1.0-1.5mm (0.039"-0.059")	45-80 p.s.i.
HVLP Turbin	1.0-1.5mm (0.039"-0.059")	10 p.s.i.
HVLP Conversion	1.0-1.5mm (0.039"-0.059")	10 p.s.i. (at the tip)

SPRAY TIPS

*Fluid Tips must be plastic or stainless steel.

PRODUCT APPLICATION (CONTINUED)

CLEANUP

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

PERFORMANCE CHARACTERISTICS

PENCIL HARDNESS

METHOD: D3363

RESULT: B

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	10
mustard	9 slight stain
Spic and Span	10

HOFFMAN SCRATCH

Method: D2197

2 kilograms to rupture

IMPACT RESISTANCE Direct/Reverse

METHOD: D2794

RESULT: 160/160

TABER ABRASION

METHOD: ASTM D4060

RESULT: Approx. 150 mg loss CS 17 1000g 1000 cycles

GLOSS (60°)

METHOD: D523

RESULT: 25/55/90

TECHNICAL DATA



VARATHANE® PREMIUM DIAMOND WOOD FINISH OUTDOOR - OIL BASED

PHYSICAL PROPERTIES

		Satin	Semi-Gloss	Gloss
Resin Type		Oil Modified Urethane-Tung Phenolic-Alkyd	Oil Modified Urethane-Tung Phenolic-Alkyd	Oil Modified Urethane-Tung Phenolic-Alkyd
Pigment Type		Silica matting agent	Silica matting agent	None
Solvents		Mineral spirits	Mineral spirits	Mineral spirits
Volatile Organic Compounds*		Less than 450g/l (3.78 lb/gal)	Less than 450g/l (3.78 lb/gal)	Less than 450g/l (3.78 lb/gal)
Weight Per Gallon/Liter	Per Gallon	7.0-7.2 lb	7.0-7.2 lb	6.9-7.1 lb
	Per Liter	0.84-0.86kg	0.84-0.86 kg	0.83-0.85 kg
Solids	By Weight	48.1-50.1%	47.9%-49.9%	47.7%-49.7%
	By Volume	42.6-44.6%	42.8-44.8%	42.8-44.8%
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)		63.3 – 66.3 m ² /L 681 – 714 sq ft/gal	63.6 – 66.6 m ² /L 685 – 717 sq ft/gal	63.6 – 66.6 m ² /L 685 – 717 sq ft/gal
Practical Coverage @ Recommended DFT (Assumes 15% Material Loss)		53.8 – 56.4 m ² /L 579 – 607 sq ft/gal	54.1 – 56.6 m ² /L 582 – 609 sq ft/gal	54.1 – 56.6 m ² /L 582 – 609 sq ft/gal
Dry Times at 70°-80°F (21°-27°C) and 50% Relative Humidity	Tack Free	3-4 hours	3-4 hours	3-4 hours
	Handle	4-6 hours	4-6 hours	4-6 hours
	Recoat	8 hours	8 hours	8 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	41°C (106°F) Setaflash	41°C (106°F) Setaflash	41°C (106°F) Setaflash
	Contains	No lead has been deliberately added.	No lead has been deliberately added.	No lead has been deliberately added.
	Warning!	CONTAINS: PETROLEUM DISTILLATES 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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