

Minwax® Technical Data Sheet
Minwax® 350 VOC Helmsman, Gloss, Semi-Gloss, and Satin

DESCRIPTION:

Minwax® 350 VOC Helmsman® Spar Urethane is specifically formulated to protect wood against nature's toughest conditions. Helmsman® forms a protective barrier against rain and moisture and its special oils allow the finish to expand and contract with the wood as seasons, temperatures, and humidity change. The enhanced ultraviolet absorbers found in Helmsman® reduce the graying and fading effects of the sun.

Note: Helmsman® Spar Urethane is not recommended for use on floors. To protect floors, use Minwax® Super Fast-Drying Polyurethane for Floors or Minwax® Water Based Polyurethane for Floors.

RECOMMENDED USE:

Minwax® Spar Urethane is Ideal for doors, windows, trim, bathroom cabinets, bar tops, kitchen countertops and outdoor furniture.

SURFACE PREPARATION:

Surface must be dry and free of paint, wax, grease, polish, dirt, old finishes in poor condition or other foreign matter. Sand to obtain a smooth, uniform surface. Remove all dust and wipe with a cloth dampened with mineral spirits. If desired, apply stain, such as Minwax® Wood Finish™ to unfinished interior wood surfaces. Follow label directions for application instructions and dry times.

WARNING: Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

APPLICATION NOTES:

- 1) Stir Minwax® Helmsman® before and occasionally during use to eliminate settling on the bottom of the can. **DO NOT SHAKE.**
- 2) Apply a THIN coat of Minwax® Helmsman® Spar Urethane using a high quality natural bristle brush. On unfinished wood, apply sufficient material to seal open end joints, edges and end-grain.
- 3) **Let dry at least 6 hours**, then sand entire surface lightly with very fine sandpaper (220 grit) to ensure an even finish and proper adhesion of additional coats.
- 4) Apply a second coat. If a third coat is desired, repeat Step #3 before applying. Note: For exterior surfaces or for previously unfinished wood, three coats are recommended.
- 5) After final coat, allow 24 hours before normal use.

Read all label directions and cautions carefully before use. **Slight ambering may be experienced when applied over light-colored surfaces.** Always spot test on an inconspicuous area to ensure satisfactory results.

COVERAGE: Approximately 400-500 sq. ft. per gallon

CLEAN UP:

For easy clean-up use mineral spirits or paint thinner, following the manufacturer's safety instructions

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DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

DRY TIME NOTES:

Dry times are based on good ventilation, temperature of 77F and 50% relative humidity. Lower temperature, higher humidity, lack of air movement, or application of thick coats will extend drying times. Always test surface for tackiness between coats.

NOTES:

When used for exterior applications, maintain by lightly sanding and adding an additional coat(s) as conditions require. Helmsman® Spar Urethane is not recommended for large exterior surfaces where maintenance would be difficult, such as decks and siding. Always spot test on an inconspicuous area to ensure satisfactory results.

This product has been formulated to comply with the environmental regulations limiting V.O.C. (Volatile Organic Compound) content. It contains higher concentrations of quality resins, which lead to a thicker consistency than ordinary urethanes. Be sure to follow label directions carefully, especially as they pertain to coverage rates and the application of thin coats.

Maximum VOC: 350 g/L (2.92 lbs/gal.). Do not thin.
Non photochemically reactive.

For questions or comments, please call: 1-800-523-9299 Monday-Friday 8am – 6pm EST.

For wood finishing tips and project ideas, visit minwax.com

SAFETY:

CAUTIONS: CONTAINS ALIPHATIC HYDROCARBONS.

Contents are **COMBUSTIBLE**. Keep away from heat and open flame.

VAPOR HARMFUL. Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or wear respiratory protection (NIOSH approved) or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: In case of eye contact, flush thoroughly with large amounts of water for 15 minutes and get medical attention. For skin contact, wash thoroughly with soap and water. In case of respiratory difficulty, provide fresh air and call physician. If swallowed, call Poison Control Center, hospital emergency room or physician immediately.

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

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WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.

TYPICAL PHYSICAL PROPERTIES

Sheen at 60°:	Satin: 25 +/- 7 Semi-Gloss: 57 +/- 7 Gloss: 90 minimum
Number of coats:	2-3
Dry time:	Minimum 6 hours
Dry film thickness:	1.0 mil/coat
Flashpoint:	>100°F (Combustible)
Applicator:	Natural bristle brush
VOC:	350 g/L maximum
Coverage:	400-500 sq. ft. /gal.
% Non volatiles:	56.0 – 59.0
Pounds/gallon:	7.70 – 8.00
Viscosity (cps):	190 - 210

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Non-Photochemically reactive.

PHYSICAL PROPERTIES:

		<u>Testing method:</u>
Resin type:	Polyurethane	
Solvent:	Mineral Spirits	
Luster:	Gloss, Semi-Gloss, Satin	ASTM D523
No. of coats:	2 recommended (1 for sand and recoat)	
Dry-time:	Recoat: 4-6 hours; 12-18 before sanding on floor	ASTM D 1640& Gardner circular
Dry film thickness:	2-3 mil	
Flash point:	> 101 F	
Applicator:	High quality natural bristle brush or foam applicator Lambswool or applicator pad for floor.	ASTM D 3828
VOC (grams/liter):	350 Maximum	
Coverage (sq. ft./qt.):	Approximately 400-500	
% Solids:	55-57	ASTM D 2369
Pounds/gallon:	7.7 –8.0	
Viscosity (centipose):	200-260	