



Wood Moisture Content for Water-Based Varnish Application

For water-based varnish, wood moisture content should ideally not exceed 18%, but lower is better for best adhesion and finish. The optimal range is typically 6-12% for interior wood and 9-14% for exterior wood, with some sources recommending as low as 6% for high-end cabinetry. Excessive moisture can cause adhesion issues, a weaker final finish, and a cloudy appearance.

General moisture guidelines:

- Maximum for all applications: Do not exceed 18% moisture content.
- Interior wood: No more than 12%.
- Exterior wood: No more than 15%.
- Cabinetry and fine furniture: As low as 6%.

Why moisture content matters:

- Poor adhesion:

Excess moisture can reduce the surface tension of the varnish, leading to a film that peels off easily.

- Weak finish:

High moisture can prevent the varnish from curing and hardening correctly, resulting in a weaker bond.

- Appearance issues:

Water-based varnishes can become cloudy or faulty if the wood is too wet.

- Grain raising:

Water-based products are prone to raising the grain. Letting the wood dry completely before varnishing helps, but you may need to mist the wood with water and sand it after the first coat to raise the grain and then sand it again for a smooth final finish.

What to do

- Use a moisture meter:

Always check the wood's moisture content with a reliable moisture meter before you begin.

- Allow wood to acclimate:

Let the wood adjust to the environment where it will be used before varnishing.

- Do not varnish wet wood:

Ensure the wood is completely dry and free of moisture before applying any varnish. If it's too wet, wait until it dries out.

