

Technical Bulletin: Awlwood Application Process

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The following optimal process may help customers achieve the very best results when using the Awlwood Varnish system

Timber Surface Preparation Process	Important Notes
<ol style="list-style-type: none"> 1. Remove all previous coatings back to bare timber grain. 2. Hard block sand timber in-line with grain with 80 grit to uniform timber grain. 3. Use wire brush to scrape and clean heavy grain structure where necessary. 4. Ensure timber is back to 'as new' condition with original color tone present. 5. Compressed air blow-down and vacuum timber to remove all sanding dust. 6. Finish sand with 120 grit in-line with grain. 7. Remove all sanding dust with compressed air and vacuuming combination. 8. White rag cleanliness check for effective sanding dust removal. 9. Handle timber only with gloved hands from this point forward – no further handling of timber with bare hands. 10. Degrease timber with Acetone or Awlwood T0202 Spray Reducer using 2 rag method. 	<p>For aged timber, ensure UV damaged wood fibres are completely removed.</p> <p>Previous coating trapped in the grain MUST be removed.</p> <p>It is very important to ensure all sanding dust and old UV damaged grain is removed especially in deep grain. Use Magnifier to check.</p> <p>Vacuum timber with a brush attachment. Vacuum along grain, across grain and then along grain again. (3 x vac)</p> <p>Repeat vacuuming until a white rag is clean and shows no sanding dust residue.</p> <p>Keep timber clean and covered until ready to begin coating.</p> <p>A fast wipedown solvent helps to flash out natural timber oil residue (Acetone or Awlwood T0202 Spray Reducer is ideal).</p> <p>Degrease just prior to first coat .</p>

Pre Coating Inspection and Cleanliness Checks (Use Magnifier Where Necessary)				
<p>Check Moisture Level of Timber (<12%RH)</p>	<p>White Cloth Sanding Dust Check</p>	<p>Check Timber Grain for Sanding Dust / Previous Coatings</p>	<p>Aged Timber: Check Weathered / UV fibers are fully removed</p>	<p>Previously Varnished Surfaces</p>

Awlwood Coating Process	Important Notes
<p>Day 1 Prepare</p> <ol style="list-style-type: none"> 1. Degrease timber directly before primer application. <p>Apply</p> <ol style="list-style-type: none"> 2. Apply Awlwood primer. Cover wood grain but do not over apply. 3. If using colored primers, Wipe away excess primer immediately. 4. Allow 4 – 8 hours for primer to tack dry / touch dry. <p>Apply 1st coat of Awlwood Gloss (un-thinned) with brush or roller keeping wet film thickness (WFT) between 50 - 75um / 2 - 3 mils per coats. Do not spray 1st coat.</p> <p>Day 2 Prepare</p> <ol style="list-style-type: none"> 5. Sand 1st coat of gloss with P220-280 making sure not to sand through the primer. 6. Remove sanding dust with compressed air and vacuum. 7. Solvent clean (T0202) to remove contaminates and dust. <p>Apply</p> <ol style="list-style-type: none"> 8. Apply 2nd coat of Awlwood gloss (un-thinned) with brush or roller keeping WFT between 50 - 75um / 2 - 3 mils per coat. Do not spray 2nd coat. <p>Day 3 Prepare</p> <ol style="list-style-type: none"> 9. Sand the Awlwood gloss with P220-280 making sure not to sand through the primer. 10. Remove sanding dust with compressed air and vacuum. 11. Solvent clean (T0202) to remove contaminates and dust. <p>Apply</p> <ol style="list-style-type: none"> 12. Morning: Apply 3rd coat of Awlwood gloss with brush, roller or spray, keeping WFT between 75 - 100um / 3 - 4 mils per coat. 13. Afternoon: Apply 4th coat (optional) of Awlwood gloss with brush, roller or spray, keeping WFT between 75 - 100um / 3 - 4 mils per coat. 	<p style="text-align: center;">Primer Application – Day 1</p> <p>Oils continually migrate from some timber. Degrease timber 10 – 15 minutes prior to primer application.</p> <p>Foam roller, brush or lint free cloth is good for primer application. Thoroughly wipe the primer over the surface in several directions.</p> <p>Wipe off any excess primer with a clean lint free rag. There should be no pooling or visible heavy patches of primer.</p> <p style="text-align: center;">Gloss 1st Coat – Day 1</p> <p>Applying the primer coat and the 1st coat of gloss the same day ensures optimal adhesion between the primer and gloss coats. Primer should be touch dry.</p> <p>Do <u>not</u> over apply or flood coat the 1st coat of gloss. Do <u>not</u> reduce 1st coat of gloss.</p> <p>Do use a foam roller or brush for first coat of Gloss. Work the gloss firmly into the wood grain. Aim to apply about 50 – 75 µm wet (2 – 3 mils).</p> <p style="text-align: center;">POT LIFE – 20 MINUTES MAXIMUM (Primer and Gloss Coats) </p> <p style="text-align: center;">Gloss 2nd Coat – Day 2</p> <p>Use soft back sanding pad to avoid breaking through to primer / timber.</p> <p>Do <u>not</u> overapply / flood coat the 2nd coat of gloss. Do <u>not</u> reduce 2nd coat of gloss.</p> <p style="text-align: center;">POT LIFE – 20 MINUTES MAXIMUM (Gloss Coats) </p> <p style="text-align: center;">Gloss 3rd Coat – Day 3</p> <p>If deep grain structure is filled, apply 3rd & 4th coat of gloss on day 3. Maintain 6 hours between applications.</p> <p>If deep grain structure is not filled, continue to apply gloss coats at 1 day intervals until grain is filled.</p> <p>Remember, some timber grain can be 200 – 300um (8 – 12mils) deep. It can sometimes take several coats of Awlwood gloss before grain filling is complete. Be patient.</p> <p>Do <u>not</u> attempt to float / heavy coat to fill deep grain! </p> <p style="text-align: center;">POT LIFE – 20 MINUTES MAXIMUM (Gloss Coats)</p>

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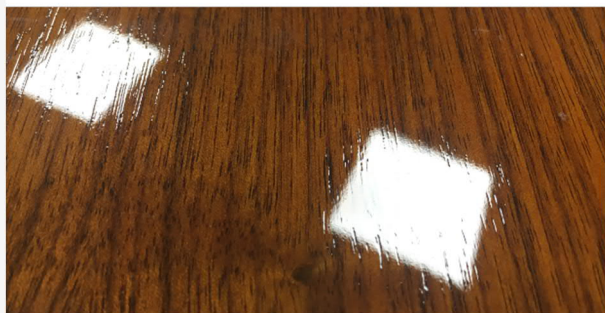
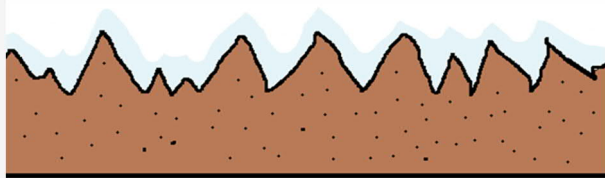
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Have you Achieved Grain Fill?

It is important to fill timber grain prior to multicoating per day. Premature multicoating could lead to solvent entrapment.

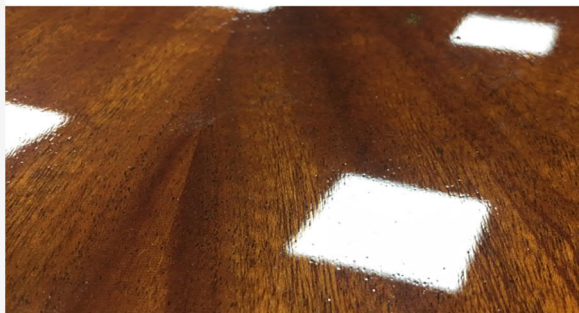
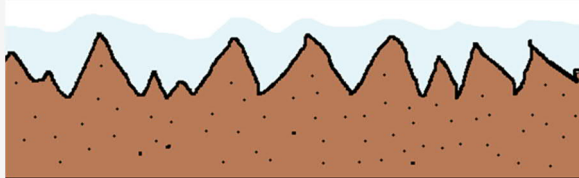
Incomplete / Poor Grain Fill

Coating is still showing clear and sharp pattern of timber grain after 24 hours since application. Carefully sand & clean thoroughly (ensuring grain pits are clear of dust) and apply a single coat.



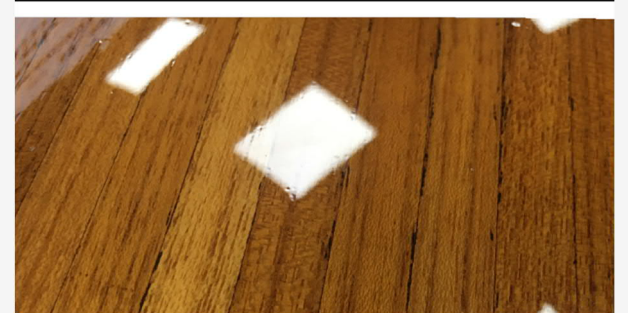
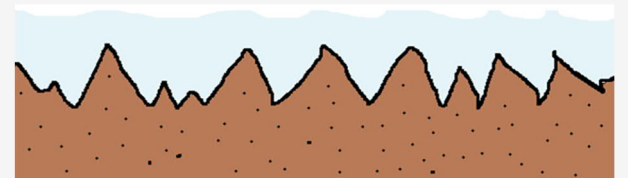
Partial Grain Fill

Timber grain is almost filled, only fine timber texture remains. Sand carefully and clean surface thoroughly. It is now ok to start applying two coats of Awlwood gloss per day.



Complete Grain Fill

Timber grain is fully filled and only slight texture from the deepest grain pits can be observed. Sand and clean surface thoroughly. It is now ok to start applying 2 coats of Awlwood gloss per day.



Assuming grain fill has now been achieved, multi-coating may commence at day 4

Day 4

Prepare

13. Sand the Awlwood gloss with 3M Maroon scotch-brite (7447) followed by P220-280
14. Remove sanding dust with compressed air and vacuum.
15. Wipe with clean water or solvent (T0202) to remove contaminants and dust.

Apply

16. Apply Awlwood gloss coats 5 and 6 by brush, roll or spray. Maintain at least 4 - 6 hours between coats dependent on temperature. WFT between 75 - 100um / 3 - 4 mils per coat.

If desired, an additional 3rd build coat may be applied on day 4 if temperature, humidity and ventilation allow

Day 5

Prepare

17. Sand the Awlwood gloss with 3M Maroon scotchbrite (7447) followed by P220-280
18. Remove sanding dust with compressed air and vacuum.
19. Wipe with clean water or solvent (T0202) to remove contaminants and dust.

Apply

20. Apply coats 7 and 8. Maintain at least 4 - 6 hours between coats dependent on temperature. WFT between 75 - 100um / 3 - 4 mils per coat.

If desired, an additional 3rd build coat may be applied on day 5 if temperature, humidity and ventilation allow

Additional Build Coats

Additional multi-coating / build coat days may be applied prior to final coat if desired

Final Coat (Day 6 or after)

A few days gap before the final coat is applied helps solvents to evaporate out of the coating if multicoating stages were applied heavily or additional build coats were applied.

Prepare

21. Block sand 320 - 400 grit to remove any final texture.
22. Finish sand up to 500 grit DA for optimal finish (optional)
23. Remove sanding dust with compressed air and vacuum,
24. Wipe with clean water or solvent (T0202) to remove contaminants and fine dust.
25. Tack rag (Use Awlgrip tack rags only) the surface directly prior to application to minimize dust particles in the paint film.

Apply

Apply final coat no. 9 of Awlwood gloss, multi-climate gloss or satin matt.



If there is to be a break day / weekend, this is a good point. It allows the solvents to fully migrate from the initial coats.

Gloss Multi-Coats / Layers – Day 4 to Day 6

Intercoat sanding is best conducted with a combination of scotch brite (to reach any lower areas) and 220 – 280 grit sanding paper. Use a soft back / interface pad to avoid hard sand through on edges or removing excessive DFT of gloss.

Avoid excessive removal of film build due to excessive sanding.

Thinning of the Awlwood gloss for coats 4 – 9 will assist with flow and minimising texture. It should not be necessary to thin the product by more than 10%.

Always maintain up to 6 hours between coats.

POT LIFE – 20 MINUTES MAXIMUM (Gloss Coats)



Gloss / SatinMatt Final Coat Notes

For best results, final coat should be applied out of direct sunlight and in minimal wind.

Early in the day is best for application.

Thin the Awlwood gloss 10% using brushing reducer (T0201) or spray reducer (T0202).

Awlwood SatinMatt and Awlwood Multi-Climate should never be thinned.

Brush: Apply full film by brush. Be ready to tip-off any runs or sags. However, do not overwork film or try to remove any brush marks, these should disappear.

Spray: Apply an initial mist coat, then follow up with a full heavier cross coat.

If an Awlwood SatinMatt finish is desired, only the final coat needs to be applied with the Awlwood SatinMatt. Use the Awlwood gloss for the build coats.

POT LIFE – 20 MINUTES MAXIMUM (Gloss and Satin Coats)



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Rules and Other Best Practices

- Sanding previously aged / coated timber: Remove at least 300um / 12 mils of the existing timber fibers. Bleached / UV damaged timber fibers exist deep in the deep grain pits.
- Final sanding of any timber should be no finer than P120 grit.
- Never use solvent containing alcohol to wipe down timber or inter-coat solvent wiping. Alcohol will stop the curing process of Awlwood.
- Avoid applications of Awlwood primer and gloss over a warm or warming substrates. This may cause some micro bubbling in the product.
- For optimal robustness, if the primer cures overnight before applying the first Awlwood coat, it must always be sanded well to provide a key, or use Scotchbrite #7447 to avoid sanding through the primer. If the overcoating window has been exceeded (18 hours @ 23C) it is best to sand back to bare timber and re-apply the primer, ensuring first gloss coat is applied on the same day.
- Always apply the first 2 -3 coats of Awlwood gloss at 24 hour intervals.
- Awlwood gloss may be applied to a clear epoxy (Epiglass or SP320 for example) that has been used to fill the timber grain or carbon fiber weave. Epoxy should be detergent washed and sanded P120 grit. Apply 8 – 9 coats of Awlwood gloss over epoxy. Awlwood primer is not required to assist adhesion over epoxy.
- Coats 3 - 5 of Awlwood gloss may be tinted (up to 10%) using the colored primers. This helps build up colour depth and ensure UV protection on some timbers prone to bleaching.
- To tint soft woods (e.g. Spruce) use the clear primer only on bare timber. Awlwood gloss coats may then be tinted with colored primers to provide an even appearance and improve UV durability. All of the primers are intermixable so tint strength can be reduced by incorporating clear.
- Do not thin / reduce the first 2 - 3 coats of Awlwood gloss and control applied wet film thickness to 50 – 75um or 2 – 3 mils per coat. Do not flood coat first 2 – 3 coats.
- Never return unused Awlwood products back to the tin.
- Take care with application of Awlwood gloss around complex shapes where the product may pool. Excessive application may cause solvent entrapment and detachment.
- Only start daily multi-coating once the timber grain has been filled.
- When brush applying Awlwood gloss, do not over work the product once applied. It will flow and stretch out naturally.
- Awlwood gloss may be lightly buffed & polished after 7 days of cure. The 3M paint correction process works well. Keep the surface wettened and keep buffing speeds slow to minimize heat buildup.
- For best system longevity, the final film thickness of Awlwood over the grain highpoints, should be no less than 250um / 10mils.
- If heavy or aggressive inter-coat sanding is used to flattened texture, additional coats may be required to attain sufficient film build.
- If 24 hours have passed before removing masking, you may need to score the paint film along the tape line with a blade. Remove tape by folding it over 180 degrees to reduce stress on paint film.