

Nash Timbers Site Inspection Process

- The Nash Timbers innovative and exciting Timber Floor Site Inspection System electronically generates a detailed report for our client.
- Nash Timbers Site Checklist helps our client address all issues that will affect the outcome of obtaining the ideal conditions for their timber floor stability.
- Nash Timbers flooring installation systems and techniques helps our client address all issues that will affect the outcome of obtaining the ideal conditions for their timber floor stability.
- Nash Timbers are using a calculated formula to measure the moisture content of the timber floor which then allows us to install the floor with evidence based results which should result in a more stable floor.

NASH TIMBERS SITE INSPECTION

Room: bedroom 1	Room: kitchen living	Room: dining
<div style="display: flex; justify-content: space-between;"> back find </div> <div style="display: flex; justify-content: space-between;"> 136 Old South Head Rd 136 Old South Head Rd </div> <div style="display: flex; justify-content: space-between;"> acoustic 19mm acoustic </div> <div style="display: flex; justify-content: space-between;"> battens 18mm battens </div> <div style="display: flex; justify-content: space-between;"> ply 18mm ply </div> <div style="display: flex; justify-content: space-between;"> species: Blackbutt room width size: 130 room height size: 19 </div> <div style="display: flex; justify-content: space-between;"> grade: Select 130 19 </div> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Tongue & Groove <input checked="" type="checkbox"/> End Matched <input type="checkbox"/> Plain End <input type="checkbox"/> Top Nail Profile <input type="checkbox"/> Secret Nail Profile <input type="checkbox"/> Dressed all Round <input type="checkbox"/> Pencil/Round </div> <div> <input type="checkbox"/> Decking <input type="checkbox"/> Rough Sawn <input type="checkbox"/> As is <input type="checkbox"/> Clients specification <input type="checkbox"/> Diameter <input type="checkbox"/> Dressed AllRound/rebate <input type="checkbox"/> Reeded </div> <div> <input type="checkbox"/> 2 sides squared <input type="checkbox"/> Turkish Coffee <input type="checkbox"/> Noir <input type="checkbox"/> Lime <input type="checkbox"/> Natural </div> </div> <div style="display: flex; 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NASH TIMBERS FLOOR AND SANDING AND FINISH GUIDE

Recommended by the ATFA under coatings Do and Don'ts

Coating can vary markedly between & within classes

- ✓ Coating performance varies markedly between classes of coatings e.g. waterborne to solventborne, polyurethane (PU), oil modified urethane (OMU), sealers, one & two packs. Also can vary markedly within a class of coatings; eg fast dry sealers, waterborne 1 pack etc.
- ✓ Functional performance is generally related to after occupancy & includes factors such as wear resistance, slip resistance, ease of maintenance, edge bonding concerns, client health impact. etc.
- ✓ On – floor performance relates to actual on the job performance factors as below
- ✓ This information is a guide to the do's & don'ts when selecting & using coatings.
- ✓ Understanding the inconsistency of a coating type can assist in ensuring the best income of a quality finish & having a satisfied customer

(Main considerations)

- ✓ Health impacts (people, pets)
- ✓ Aesthetic factors, (colour impact on different species & sheen levels)
- ✓ Functional properties, (slip & wear resistance, level of maintenance)
- ✓ Application user friendliness for installer with considerations of wet edge time, tannin & application marks resistance, surface quality, pot life, 1 or 2 pack mix time & wastage factors
- ✓ Cost
- ✓ Duration of recoating
- ✓ Re-occupancy, time in how long it will be until you can move back in.

PERFORMANCE OF A COATING.

- ✓ Temperature & humidity of room & floor surface
- ✓ Timber species ? Tannins
- ✓ Age & storage of the coating
- ✓ Pre mixing prior to use
- ✓ Phasing, settling or floatation of additives in Coating
- ✓ Sanding & application tools
- ✓ Coatings application technique

The information provided below is directed to the mainstream coatings classes of: solventborne polyurethane one (that is moisture cured or MC) and two pack, waterborne polyurethane (WBPU) one and two pack, and oil modified urethanes (OMU's). However with the growth in recent years of hard wax oils, some inclusion is made. It is also intended as a guide to provide an understanding that the properties can vary within a class of coating, based on typical properties of the class of coatings.

1 Health issues

Of prime importance is the health yourself as the contractor and that of your client.

Solventborne Polyurethanes	Oil Modified Urethanes (OMU)	Waterborne Polyurethanes (WBPU)	Hard Wax Oils (HWO)
Do explain to the client that these materials contain volatile organic compounds (VOC) and can gas off for many days and are not advised for premises where occupants or visitors may enter the premises for some weeks after coatings have been applied if there is a respiratory sensitive person likely to enter the premises. This would include asthmatics, emphysema, or other ailments. It is also advisable to avoid solventborne coatings containing VOCs where premises occupants are pregnant, where solvent traces in the mother's bloodstream can enter the foetus. A 'safe' period for re-occupancy has not been established as this would involve epidemiological studies.	Do explain to the client that these materials contain volatile organic compounds (VOC) and can gas off for many days and are not advised for premises where occupants or visitors may enter the premises for some weeks after coatings have been applied if there is a respiratory sensitive person likely to enter the premises. This would include asthmatics, emphysema, or other ailments. It is also advisable to avoid solventborne coatings containing VOCs where premises occupants are pregnant, where solvent traces in the mother's bloodstream can enter the foetus. A 'safe' period for re-occupancy has not been established as this would involve epidemiological studies.	Don't assume that waterborne coatings will not cause respiratory issues as they may still contain VOCs. Waterbornes all contain solvents (Glycol ethers). Two packs can contain strong solvents in the part B isocyanate and these are respiratory sensitisers and can trigger adverse reactions in sensitive persons some days after coating. Do recommend one pack waterbornes as the least respiratory sensitive polyurethane coatings option.	Technically many are low VOC although some are high. However many contain SVOC (Slow Volatile Organic Solvent) which may volatilise over a longer period of time. Don't assume these are a healthy option as the HWO's do contain organic volatiles and can still adversely impact respiratory sensitive persons. Do recommend the zero, low VOC and low odour versions as the least sensitive for respiratory issue clientele.
Do use a respirator in all coatings work as they are essential Don't forget the change frequency required for the cartridge. Don't rely on solvent odour as the odour threshold is well above the danger level.	Do use a respirator in all coatings work as they are essential Don't forget the change frequency required for the cartridge. Don't rely on solvent odour as the odour threshold is well above the danger level.	Do use a respirator for two pack waterbornes if the part B has a strong solvent odour.	Do realise that some manufacturers of the high VOC type do recommend the use of respirators
Do ensure all pilot lights and sources of ignition are isolated prior to coating.	Do ensure all pilot lights and sources of ignition are isolated prior to coating.		
Do understand your responsibility under legal Duty of Care and your potential liability under Professional Negligence. Do offer the client the choice of all coatings technologies determining if respiratory or pregnancy issues exist with the client family or early visitors, so as to enable them to make an informed decision on the choice of coating. Don't forget that it is what is best for the client and not what may be best for the contractor that is more important.			

3 Temperature and Humidity

All coatings are influenced by both temperature and humidity although some are more sensitive than others.

Consequences of high temperatures are faster drying and potential for mainly orange peel, lap marks, air bubbles in coat, shorter pot life for two packs and glossier satins.

Consequences of high humidity are the potential for gloss loss, faster cure of solventborne polyurethanes and slower drying of waterbornes.

Consequences of low temperature are the potential for slower drying and curing, delamination of green waterborne coats on sanding, crystallisation from poor coalescing of waterbornes.

Do pay attention to the coating manufacturer's 'window' of application temperature, in particular as stated on labels and data sheets. Manufacturers do realise that contractors will on occasions need to work outside of the recommended range and can generally provide advice or have additives that can enable one to do so.

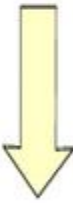

Solventborne Polyurethanes	Oil Modified Urethanes	Waterborne Polyurethanes	Hard Wax Oils
Do use wet edge extenders in warmer temperatures, generally above 25 deg C. Do take extra care in planning the coating pattern to avoid orange peel at a loss of wet edge from coating over a part dry coating edge.			
Don't leave coatings containers in a hot van longer than necessary.			
Don't cut-in edges too far ahead in hot weather so as to avoid picture framing and orange peel when over coated.			
Do realise that if coating in wet or otherwise very humid weather that the gloss level could be reduced.			
Don't apply thick as puddling of the coat or heavy stop start marks may occur as the slower drying in cold weather means more open time of the coating on the timber, which allows for more of the extractables in the timber such as tannin, waxes and resins, to be extracted into the wet coating. These contribute to picture framing, tannin staining, roller and other application marks.	Also note that puddled coatings can take a substantial time to cure through, in all weather conditions.		
Don't forget to add thinners in cold weather as coatings will thicken up (viscosity increases). Thick coating can give poor flow and entrap air bubbles.			
Don't apply coatings if drying will occur below Dew Point and weather is cold, as a dull surface can occur with gloss coatings.	Don't apply coatings if the drying will be below Dew Point and the temperature is less than 12 °C, as crystallisation can occur from poor coalescence.	Don't apply coatings if the drying will be below Dew Point and weather is cold, as a dull surface can occur with gloss coatings.	

4 Material factors

Solventborne Polyurethanes	Oil Modified Urethanes	Waterborne Polyurethanes	Hard Wax Oils
Don't re-occupy the premises until an adequate state of cure of the coatings. Curing for 3 days at 25°C is generally adequate to reinstall furnishings. Double this time for 15°C.	Cold temperatures greatly slow the cure on most OMU's. Don't overlook the significant slowing of cure in cold weather. A 3 day cure at 25°C can extend to 10 days at 15°C.	Waterbornes have the earliest re-occupancy time of these categories. Curing for 2 days at 25°C is generally OK. Don't ever coat where the drying will be at less than Dew Point (or if raining) as the drying can be almost zero. In extended periods of cold damp weather it can take up to 10 days for a waterborne floor to cure adequately for re-occupancy without damage to the coating (e.g. indenting).	Cold temperatures greatly slow the cure on most HWO's. Don't overlook the significant slowing of cure in cold weather. A 3 day cure at 25°C can extend to 10 days at 15°C.
Do make sure that the coatings are within their 'use by date' when used. Most coatings will thicken up as they age causing more orange peel and rejection as well as entrapped air bubbles. Defoamers will also lose effectiveness with time. Coatings can be used past their 'use by date' but check with manufacturers as to how to treat them: a common method is to use the overage material on earlier coats but not the last coat.			
Do always shake the coatings containers prior to use. All coatings contain additives that can float or settle based on their specific gravity (SG). These can include surface active materials that if not shaken back into the coating will bulk and can cause cratering, pitting, rejection, orange peel or gloss variation. This is especially the case with all satins where the matting agent can float or settle, so causing higher or lower gloss from the one container if not homogenised by shaking or stirring prior to use.			
Don't store coatings in hot places as they will deteriorate, even though they may be within their 'use by date'. This accelerated ageing from storage will give the effect of premature reaching their 'use by date' property loss. Maximum storage temperature should be in the order of 25°C or for short periods of a few days up to 30°C. Likewise don't expose coatings containers to very low temperatures. Minimum temperature of storage should be 15°C.			
Don't store at low temperatures (less than 15°C) as fine crystals of isocyanate can form causing fine rashing in the coat.		Don't store at low temperatures (less than 15°C) as coagulation of the coatings can occur.	Don't store at low temperatures (less than 15°C) as gelling of the coatings can occur.

2 Wear Resistance

Wear resistance is perhaps the most important functional property that influences coatings type selection.

<ul style="list-style-type: none"> Two pack solventborne Polyurethane One pack (MC) Moisture Cure Polyurethane Two pack Waterborne Polyurethane (2K WGPU) One pack waterborne Polyurethane (1K WGPU) Oil modified urethane (OMU) Hard wax oils (HWO) <p>Note: Some Hard Wax Oils can be replenished as required</p>	Order of decreasing wear resistance	Order of increasing maintenance requirements
		
<p>Important note: Don't rely on TABER or other lab wear resistance data as a definite indicator of on-floor performance as it is often unreliable between classes of coatings</p>		

5 Application

Solventborne Polyurethanes	Oil Modified Urethanes	Waterborne Polyurethanes	Hard Wax Oil
Don't use new roller covers on last coats as they may shed pile and cause 'pimples' in the coat, so 'de-fluff' before use and use on earlier coats till shedding ceases. Modern microfibers shed very little.			
		Don't use short pile roller covers as thin applied films will tend to dry quick and give an orange peel effect. Pile of 8-10 mm appears to be optimum.	Don't apply the coatings too heavy as through cure can take many days longer to occur.
		Don't cut-in the room too far ahead as picture framing is more likely. Only cut-in what will be overcoated in the next pass.	

6 Application marks

Application marks include roller marks, stop / start marks and picture framing.

<ul style="list-style-type: none"> Two pack solventborne Polyurethane One pack (MC) Moisture Cure Polyurethane Oil modified urethane (OMU) Hard wax oils (HWO) One pack waterborne Polyurethane (1K WGPU) Two pack Waterborne Polyurethane (2K WGPU) 	Order of decreasing resistance to application marks
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✓ This information is a guide to the do's & don'ts when selecting & using coatings.

✓ Understanding the inconsistency of a coating type can assist in ensuring the best income of a quality finish & having a satisfied customer

Timber floor finishes can be grouped into four main categories. Penetrating oils and waxes, curing oils and alkyds, oil modified urethanes, and polyurethane's, the latter three categories being available in solvent borne and waterborne. Performance parameters such as durability or resistance to wear can vary significantly within a category as well as between categories. All categories can be recoated with refurbishment coats.

Timber Floor Coatings							
Property	Penetrating oil / wax	Oil based finishes	OMU	Polyurethane			
				Solventborne		Waterborne	
				1 pack	2 pack	1 pack	2 pack
Wear resistance	Low	Low-Med	Medium	Very High	Very High	Med-High	Med-VH
Ability of the floor to accept careful foot traffic 3 days after coating. (Ave. Temp. 20°C)	Low	Low	Medium	Medium	High	Medium	High
Timber colour 'richness'	Low-High	High	High	High	High	Low-Med	Low-Med
Resistance of the coating to yellowing with age	Low	Low	Low	Low-High	Low-High	Med-High	Med-High
Ability to cure in cold & dry weather	Low	Low	Medium	Medium	High	Medium	High
Ability to cure in cold and damp weather	Low	Low	Low	Medium	High	Low	Low
Edge bonding resistance	High	High	Med-High	Low-Med	Low	High	Med-High
Rejection resistance	High	Medium	Medium	Low-Med	Low-Med	Medium	Medium
VOC emission at application	Low-High	High	Med-High	High	High	Low	Low-Med
Inhalation hazard when coating is applied	Low	Medium	Medium	High	Very High	Low	Medium
Odour on application	Low-Med	Medium	Medium	High	Very High	Low	Low-Med
General product cost	Med-High	Low-Med	Medium	Medium	Medium	High	Very High

Common Site Issues

ISSUE	EVIDENCE	EVIDENCE
Abnormal grain raising	Too course paper used on final sanding Incorrect coverage rates used with primer Timber too dry or softwood species	Temp too low increasing drying time Primer was not dry before over coating
Unsatisfactory levelling	Finish applied too thinly, finish dried too quickly High temp & low humidity, dried too quickly Floor was too hot due to direct sunlight	The finish was too warm or too cold Windows were open on a warm day
Patchy appearance with dark & light colouration	A top coat instead of a primer was used for 1 st application The primer was not totally dry, allowing the top coat to penetrate into the timber	Primer was applied too thinly or unevenly- gloss variations may be seen
Blisters & Bubbles	Finish dried too quickly-air bubbles did not have time to disperse Finish was applied too thinly-dried too quickly	Finish too warm or cold Floor too warm due to direct sunlight Finish too old or stored incorrectly
Adhesion Issues- Finish system applied to bare wood	An incompatible stain has been used A solvent based primer has been used Contamination	Floor was covered with an impermeable covering
Adhesion issues: Following coating/ recoating	Floor has been treated with wax or polish Insufficient abrasion carried out	Floor was not cleaned properly Incompatibility with pre-finished coating
Finish takes longer too dry than normal	Insufficient airflow Finish applied too thickly or unevenly	Low temp or high humidity
Swirls, cobwebs in final finish	Finish was abraded too soon	Floor abraded too <u>coarsly</u>
Tannin Bleed	Tannins are drawn to the surface when using waterborne floor finishes, usually after 2 nd coat	More commonly Blackbutt, Tallowood Bona recommend using a Prime classic

NASH TIMBERS SAMPLE BOARDS

TIMBER FINISHES
TIMBER FLOOR
SPECIALIST

LNL-700A	Bona Naturale	Synteko Classic 35	Synteko Natural	Bona Traffic
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Note: Alcohol based finish enhances the colour (Synteko Classic)
Oil based finish darkens as well (Synteko Natural)
Waterbase finish shows a more natural look (Bona Naturale & Bona Traffic)
Water & oil base finish it staops the tanin & gives a more natural finish (LNL)

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NASH
TIMBERS
TIMBER INTELLIGENCE

SUMMARY OF NASH TIMBERS SITE INSPECTION & FLOOR INSTALLATION GUIDELINES

1. Before installing a timber floor ensure that a thorough site inspection is conducted:

- Access, parking, drainage, site in relation to street & neighbour, level
- Crawl space, substrate condition, under floor ventilation, UV Light
- Most suitable species or flooring type for site
- Calculate the control joints required using EMC calculator
- Floor Finishes: The colour in the board can react differently with certain finishes

2. On completion of a thorough site inspection ensure:

Issues are addressed:

- mechanical ventilation
- Moisture barrier
- Need to level substrate
- Control joints needed to allow for expansion of board
- UV light needs to be blocked
- Is heating an issue
- No water is present
- Finish will be suitable for family or client

A TIMBER FLOOR IS A WORTHWHILE INVESTMENT INTO YOUR HOME

Nash Timbers Site Inspection summary:

- Nash Timbers visit site
- Thorough site inspection is completed and discussed with builder
- Problems identified
- Photos taken
- Different solutions discussed
- Nash Timbers Site Report and photos emailed with quote