

Alternative coatings: know your oil and wax coatings

Oil and wax coatings have enjoyed a resurgence as popular alternatives to traditional high gloss solvent-based polyurethanes, modified oil finishes and waterborne polyurethane coatings. Trends in interiors show that consumers are seeking a natural look when finishing floors to complement the natural beauty of timber with trends for gloss levels moving to satin and matt in recent years. Flooring contractors should have oils and waxes included in their product and service offer and know how to apply these surface finishes as local market share continues to grow.

Prior to the use of polyurethanes or plastic surface seals, oils were the traditional finish of choice for timber flooring. In Europe, where the natural look for timber has been in demand for many years, oils account for a large proportion of commercial wood floor finishes and a high percentage of domestic applications where oils are best suited.

According to Giles Whittle-Herbert from Whittle Waxes, the alternative coatings market share in some countries in Europe is as high as 30%. The market for these coatings in Australia is considerably smaller but rising. Some contractors use oils exclusively. For example, Anro Floorcare, a floor sanding company in Melbourne, has used oil coatings exclusively for the last 11 years.

Flooring contractors need to make floor finish recommendations based on suitability to the job and should consider oils for finishing timber clad walls, ceilings and floors that do not have to carry heavy, dirty traffic, for example in domestic living spaces and commercial interiors away from main entrances.

Ongoing maintenance needs should also be considered when choosing to use oils which require ongoing reapplication with an annual reoiling recommended by penetrating oils distributor, Livos Australia. Oils do not require the major project of resanding, just ongoing, regular reapplication to keep a timber floor in top condition.

A well-known commercial project in Europe is Copenhagen Airport which has had penetrating oil applied to it for many years. The oiled timber floor at Copenhagen Airport is in the Duty Free, boarding gates and Passport-Immigration section of the airport, well away from the entrance. The floor has worn extremely well over the years with a constant rotation



Livos Australia

NATURAL IMPREGNATING OILS

Natural and safe surface treatments

- Impregnates and protects
- Extremely economical
- Easy to rejuvenate
- Ingredients fully declared
- Tested to European Standards

Showroom
6 London Drive
Bayswater 3153
ph 03 9762 9181
livos.com.au



Copenhagen Airport Immigration. Image courtesy Brisbane Times.



Copenhagen Airport Duty Free. Image courtesy Synteko

for re-oiling, meaning there is no need for resanding and thus no interruption to airport operation.

Penetrating oil finish soaks into the wood fibres, facilitated by buffing. As the oil cures and hardens in the top layer of wood fibres it forms an integral part of the timber floor, creating a protective surface that is not only part of the wood floor but achieves a wear-resistant finish. These natural oils allow the timber to breathe and move as the environmental conditions change.

The original high solvent content buffing oils on the market have gradually become less popular in Europe due to health concerns and legislation.

"Although they are often used for the initial application onto exotic species to provide a base for other applications, there is a definite trend towards the use of high solid, low solvent oils with solvent levels generally below 20g/Lt, compared to a traditional buffing oil which would usually be above 400g/Lt," says Adrian Ayris of Bona.

After the introduction of high solid oils, the next step was to combine oil and wax into one product to make the most of both product attributes. High solid buffable wax oil systems are applied with a squeegee, in the same manner as high solids oils, to help with penetration of oil into the timber whilst leaving a low build soft sheen buffed wax finish.

Another development in the alternative coatings sector has been hard wax oils. These systems are usually applied by roller or brush in a two-coat system which requires little or no buffing. The finished floor has a surface

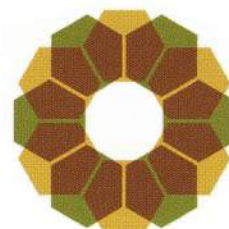
Continued page 14

Blitz the boys at your next trivia night with some of the history of oil coatings!

- Pure tung oil is believed to have originated in ancient China and appear in the writings of Confucius from about 400 BC.
- Throughout history, the Chinese have used tung oil to waterproof the masts and sails of timber boats, to finish furniture of royal families and according to legend, to seal the Great Wall of China. BIG job.
- When Marco Polo returned from China, he brought tales of "China wood oil", but tung oil was not used in the west until the 1900s.
- In Australia and the USA, tung oil has become a commonly used marketing term for polymerised oils, wiping varnishes and oil/varnish blends (sometimes containing no tung oil at all) with all containing solvents and/or chemical driers.
- Since the protective properties of linseed oil were discovered in the late 1800s, people have been oiling timber floors and furniture (even cricket bats). To enhance the finish and further increase its durability, beeswax was often applied afterwards but due to its relative softness this gave little protection and did not last.
- Modern beeswax polishes contain about 25% Carnauba to give a harder finish. Although these products were high maintenance they did offer some protection against liquids and wear, had low toxicity and were infinitely replenishable.

Whittle Waxes

The Australian experts in ecologically harmonised finishes for naturally beautiful timber



whittle
WAXES

Give us a call for a brochure pack on

1300 326 929

www.whittlewaxes.com.au

Alternative coatings cont. know your oil and wax coatings

build and leaves an attractive durable protective coating on the floor. Due to the ease of use and attractive appearance, these systems are becoming more popular with contractors, designers, specifiers and consumers alike.

A distinguishing feature of many oil systems is that not only do they have a very high solid content but they are manufactured from cold pressed vegetable oils and aromatic hardening oils.

Solids are anything left on the floor after the coating has dried and cured. Solids are expressed as a percentage of weight. A coating with 90% solids will have only 10% of the product evaporating into the atmosphere. Simply, the higher the solids, the more coating will have been left on the floor after it dries, influencing the durability of the coating.

Oil and wax oil finished floors can be spot-treated where needed, or spot repaired if necessary, instead of the need to be fully sand and refinish a damaged or spot-worn floor.

"Maintenance is simple and if handled properly, will prevent

a wood floor from ever having to be resanded," says Tony Kellman of Synteko. Tony recommends washing the floor regularly with wood soap diluted with warm water. A typical soap may contain soy, coconut fats and lanolin, which feed the timber leaving an invisible film on the surface of the floor for added protection. Periodically, maintenance oil should be buffed into the surface to rejuvenate the floor finish.

Looking after floors which have been finished with hard oils and waxes is the same as for any other floor: keep the amount of grit and dirt to a minimum, use dirt trapping mats at all entrances, apply protective pads to furniture, avoid high heels, consider using rugs in high traffic areas and avoid wetting the floor excessively.

In addition to penetrating oils, some timber flooring contractors apply hard wax to enhance the finish and improve the floor's durability even further. In the past, beeswax was used to protect timber but proved to be difficult to use. With the introduction of Carnauba mixed with the beeswax, hard wax finishes became a more acceptable finish with improved performance.

Today, companies have developed products using a blend of oils including linseed and liquid waxes including Carnauba. By adding binding agents and natural driers, hard wax oils



Image courtesy Livos Australia

TONY'S TIP: Remember that not all oils are the same. Contractors should be very careful to clarify exactly what the customer means when asking for an oil finish. A very costly mistake would be to put down a modified oil finish (a surface treatment) when the client is expecting a penetrating hard oil. Always clarify in writing.

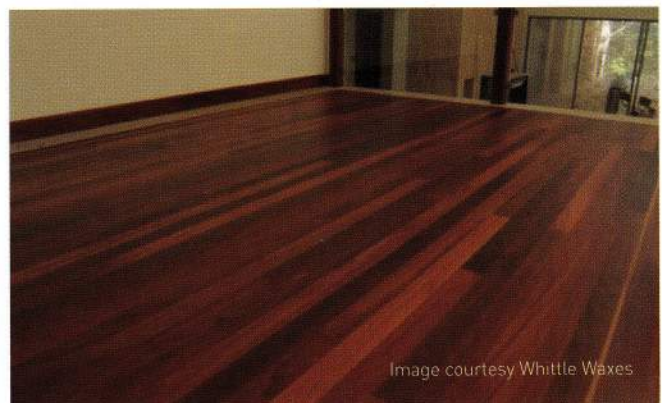


Image courtesy Whittle Waxes

are hard, durable and easily to maintain surfaces for most flooring situations.

Environmental considerations are becoming more and more important for the entire building industry with the contents of the product, the packaging and the application fumes being important elements of environmental assessment. Oils and wax oil systems are predominantly manufactured in Europe and have to comply with EU standards for VOC emissions, environment and sustainability. Oil systems are highly certified for most situations, with certificates supporting such properties as antibacterial characteristics and commercial slip ratings.

Manufacturers are often ISO rated and have strict requirements that require products to be harmless to humans, animals and the environment from manufacture through to their final application. Harmful substances, such as heavy metal driers and plant-derived Terpenes have been renounced by some companies due to potential health risks. Similarly there are manufacturers that extol the environmental virtues of low or zero VOC oils as a priority.

Flooring contractors considering using oils should not be put off by the cost of the product. Penetrating oils require a

lot less product than traditional finishes and the average cost per square metre of materials is favourable when compared with traditional finishes. According to Livos Australia, when compared with other popular finishes, oils are a cost-effective option. However, when looking at ongoing costs, the yearly maintenance applications recommended by many manufacturers should be considered as well.

A three-coat waterborne polyurethane system came in at \$8.14 per square metre. A two-pack solvent based finish as part of a three-coat system cost \$4.84 per square metre. This compares with a natural oil sealer, applied in three coats at \$3.70 per square metre.

Contractors should be able to offer their clients a full range of flooring finishes in order to recommend the right timber finish for each project and budget, with an ongoing maintenance plan. Penetrating oils and waxes should be included in every contractor's product range and skill set. *f*



PNEUMATIC TOOLS FOR
SOLID AND ENGINEERED HARDWOOD FLOORING

FASTENS
WITHOUT
COMPROMISE **Primatech**

P250

NEW

- T Type 19 ga
- L Type 18 ga
- S Type 15-1/2 ga

→ 58-110°





Primpact
Powered

THE PRIMACT ENGINE:
THE HEART OF THE P250/Q550
offers reliability, extended performance and
an unequalled smoothness of operation.

- Short nose and compact valve design provide an all-around striking surface and enable the nailing of **more boards (4 1/2" closer)** to the end walls.
- Finely threaded screw-in cartridge assembly for precision, **easy on-site dismantling** and durability.
- High-speed action and few moving parts, for a **powerful yet soft stroke**, for a shorter air-saving cycle and increased precision.
- Reduced wear effect and **quick interchangeability** of PRIMACT engines between same generation units.

PRIMATECH
www.primatech.ca
800-363-1962
sales@primatech.ca

Perfectly adjustable to the width & height of the tongue
No shim required



SYNTEKO®



- Eco-friendly with zero VOC's
- Extremely durable (100% solids)
- Economical with coverage of 30 - 40m² per litre
- A natural product that enhances the natural beauty of timber floors



Distributed by Synteko Pty Ltd. call 02 9406 8100 www.synteko.com.au info@synteko.com.au