

Non-toxic Floor Finishes Guide

Non-toxic, Hard-wearing Water-based
Timber Floor Finishes for Professional Use

Bona[®]



The World's Best Floor Finishes

As a flooring specifier or flooring industry professional, the success of your business depends on satisfied clients and word of mouth recommendations. Every project or installation needs to be completed to the highest standards to ensure the profitability and ongoing success of your business.

Whichever Bona finishing solution you choose you are guaranteed an outstanding result. The development of the Bona non-toxic finish systems over many years has resulted in unmatched wear resistance and durability. Choosing Bona means you will be providing world-leading environmentally conscious non-toxic products.

Bona is recognised as the world leader in the production of non-toxic finishes for timber floors having launched its first range of water-based coatings in 1979. Since then Bona has been constantly researching and developing their product range.

Bona finishing products are produced in Malmö, Sweden with distribution in more than 75 countries across the world. Bona finishes have been used to coat more than 750 million square metres of flooring making Bona the world's biggest selling range of non-toxic water-based floor finishes.

In Australia, Bona finishes have been available for more than 25 years through exclusive distributors EFP and are the market leader. Expert technical advice and product support is available for architects, professional industry specifiers, contractors and home owners.

The current Bona range includes three primers and five top coats, as well as the range of DriFast stains. Simply choose the combination that best suits the project and the needs of your client. The following pages provide further details of the different finishes to help you make an informed choice on product selection.

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Product datasheets and safety datasheets for all Bona products can be found at bona.com.au



The Non-toxic, Sustainable Choice

All Bona floor finishes are non-toxic water-based coatings. Bona reduced the impact on the environment by moving from solvent based to water-based finishes in 1979. Ongoing research and development has seen Bona become a world leader in water-based coatings for timber floors.

The major difference between toxic solvent based coatings and non-toxic water-based coatings is the amount of Volatile Organic Compounds (VOC's) that evaporate as the finish dries. In all finishing products the polyurethane content has to be 'carried' in a liquid. This liquid evaporates leaving behind the polyurethane finish film. Ten litres of finish (the amount required for a typical 3 coat system over 30 m²) results in approximately six litres of the 'carrier' liquid evaporating. In a solvent based finish this means six litres of toxic solvents evaporates into the air. With non-toxic Bona water-based finishes, approximately six litres of harmless water (H₂O) evaporates.

Water-based finishes still require small amounts of VOC's within the finish to ensure that the coating forms a smooth surface, however no Bona finishes contain any free isocyanates. Most Bona finishes are below 57 grams per litre (g/Lt) VOC and none exceed 100 (g/Lt), well below the EU standard of 140 (g/Lt). By comparison most toxic solvent based finishes on the Australian market are more than five times this at above 500 (g/Lt).


Low VOC's means with Bona there is no need to vacate premises during application due to solvent fumes and no concern about the health effects of toxic chemicals.

Studies have shown health risks associated with solvent based toxic VOC's* bring serious health risks not just for the contractors applying them but also home owners and other 'passive' users who come into contact with finishes containing high VOC levels.


The significance of these dangers is often not communicated to home owners or others who may be affected. Australian geneticist and cell biologist Dr Judy Ford** notes: "Isocyanates irritate the skin, mucous membranes, eyes and lungs and cause gene and chromosome damage in humans. It is most likely that it will be proven to cause cancer in people".

In Europe, where the EU strictly controls VOC levels, solvent based finishes can no longer be used commercially. All Bona water-based finishes meet EU standards for VOC levels including the strict German **DIBt** building standard and the EU's **Building Construction Directive**. In addition, Bona finishes meet the requirements of the Green Building Council of Australia's (**GBCA**) Green Star rating scheme.

Solvent Based Finishes:
Approx. six litres of **toxic solvent** evaporates into the air every ten litres of finish



Bona Water-based Finishes:
Approx. six litres of **water (H₂O)** evaporates for every ten litres of finish




A Finish for Every Type of Floor Use

The key to beautiful, hard wearing, long lasting timber floors is to select the right finishing system and to combine it with a maintenance and refurbishment program. When choosing the floor finish, not only the wear requirements but also the aesthetic needs of the room should be considered.

Whilst some Bona finishes are designed to last many years plus in a heavy use commercial environment, often this level of protection is simply not needed in low use residential applications. However, each finish specification has a slightly different appearance and sheen range allowing you to choose a particular product to meet the aesthetic requirements of your project.

The following guide is designed to give general advice on the selection of finishes for coating unfinished timber in common situations:

Bona Finishes Comparison Guide

Product	Normal Residential Lounges, Studies, Bedrooms	Heavy Residential Kitchens, Dining Rooms, Entrances	Commercial Retail Outlets, Restaurants, Public Buildings, Offices	Wear Resistance (SIS 923509)
Bona Mega	2 applications	2 applications	Not Applicable	5 mg/100 revs
Bona Traffic	2 applications	2 applications	2 applications	2.5 mg/100 revs
Bona Traffic HD	2 applications	2 applications	2 applications	1.5 mg/100 revs
Bona Traffic HD Anti-slip	2 applications	2 applications	2 applications	2.5 mg/100 revs
Bona Traffic Natural	1-2 applications	2 applications	2 applications	2.5 mg/100 revs (3 coat system)

A single application of a Bona Primer (Intense, Classic or White) must be used prior to the application of a top coat. N.B. It is not advised that Bona Mega is used in conjunction with Bona White primer.

Where previously coated floors or prefinished flooring is to be coated it is recommended that Bona Traffic HD or Traffic be used. Preparation of the surface should be carried out in accordance with the Bona Overcoating Instructions datasheet. An adhesion test should be performed prior to coating the floor.

Additional information regarding Bona finishes, including technical datasheets, safety information and slip resistance certificates, can be found at bona.com.au

*For more information on VOC levels visit: 1. epa.gov/indoor-air-quality 2. environment.gov.au/air-quality-standards

**Dr Judy Ford, University of Sth Australia Education Advisor

Bona Primers

Why Primers are a Good Idea

Bona primers should be used in a single application prior to the application of a top coat where bare timber is to be coated. Primers ensure that the timber has an even look without discolouration or patchiness. They are also designed to minimise the risk of edge-bonding, which can occur when the top coat of finish glues the floorboards together preventing the timber from shrinking or expanding naturally in response to climatic changes. In addition, primers dry faster and cost less than top coats, saving both time and money. Generally there is no need to abrade the primer before applying the next coat unless it is necessary to remove excessive grain raising. When the top coat is applied it cannot penetrate the primer and no further grain-raising occurs.

Bona White

Bona White is ideal for creating a Scandinavian style 'white' look. It gives a light whitewashed appearance and on some timber species can preserve an impression of raw, untreated timber. Bona White is most suited for use on lighter 'blonde' floors to enhance and emphasise the natural colours of the species. If you want a more solid white look simply add an extra coat. For the most natural effect combine with Traffic HD Extra Matt, Traffic Matt or Traffic Natural top coats.

- Whitewashed look
- Non-toxic
- Non-yellowing
- Seals the timber to give an even finish
- Reduces grain raising
- Minimises the risk of edge bonding
- TVOC 60 g/Lt
- 5.6% total solvent content
- 12 m²/Lt coverage
- Drying time 2-3 hours

Bona Intense

Bona Intense can be used on all timbers, but is specifically recommended on timber species with high tannin content such as Blackbutt and Tallowood. This minimises a phenomenon known as 'tannin bleed' which can cause an unsightly colour change in these types of timbers often described as a 'green' or 'mouldy' appearance. Bona Intense is also ideal for applications where a slightly deeper, richer, more golden appearance is desired to enhance the natural colour of the timber.

- Designed to reduce tannin bleed in high content species
- Non-toxic
- Non-yellowing
- Seals the timber to give an even finish
- Reduces grain raising
- Minimises the risk of edge bonding
- Dries quickly, lower cost than top coats
- TVOC 84 g/Lt
- 8.1% total solvent content
- 8 m²/Lt coverage
- Drying time 1-2 hours

Bona Classic

Bona Classic is designed for general use but should not be used on high tannin timber species. Bona Classic is particularly suitable for softwood plank floors such as Pine and parquetry floors where greater movement is associated with both the species of timber and the construction of the floor. Bona Classic is ideal for use where the aim is to keep the timber as light in colour as possible.

- Ideal for softwood and light coloured species
- Non-toxic
- Non-yellowing
- Seals the timber to give an even finish
- Reduces grain raising
- Minimises the risk of edge bonding
- Dries quickly, lower cost than top coats
- TVOC 24 g/Lt
- 2.3% total solvent content
- 8 m²/Lt coverage
- Drying time 1-2 hours



Bona Mega

The Perfect Solution for Any Home

Bona Mega sets a new standard for residential finishes. Mega is the world's biggest selling non-toxic one component polyurethane timber floor finish. Since being launched in 1997, Mega has been used to finish more than 175 million square metres of flooring in over 75 countries. In contrast to other single pack finishes that simply dry, Mega crosslinks with oxygen from the air, giving improved scratch and scuff resistance.

With excellent overall performance, Bona Mega is a good choice for timber floors in busy homes. Available in four different sheen levels: gloss, satin, matt and extra matt.

Designed for normal and heavy residential use:

- 1 component water-based top coat
- 100% polyurethane with oxygen crosslinking system
- Excellent wear resistance
- Non-toxic
- Non-yellowing
- For use with Bona primers
- TVOC 65 g/Lt (av all sheens)
- 6.3% total solvent content
- 8-10 m²/Lt coverage
- Drying time 2-3 hours
- 5 mg/100 revs wear resistance (SIS 923509)
- 4 sheen levels: Gloss, Satin, Matt and Extra Matt
- Gloss Level (60°):

Gloss	90
Satin	45
Matt	25
Extra Matt	10



Bona Traffic

The All Round Coating for High Traffic Areas

Bona Traffic is the ideal all round solution. Perfect for use in heavy traffic residential applications, as well as most typical commercial uses. Bona Traffic is a commercial grade wear resistant finish with proven performance on more than 150 million square metres of flooring. In standard tests, Traffic has been shown to have about twice the wear resistance of ordinary water-based products – hence the name.

Traffic is a 2 component finish available in two sheen levels: satin and matt. Whichever sheen level is chosen, Traffic is the right choice for busy homes as well as commercial situations such as offices, studios, galleries, public buildings and retail shops.

Designed for heavy traffic residential use and commercial floors:

- 2 component water-based top coat
- 100% polyurethane
- Excellent wear resistance
- Non-toxic
- Non-yellowing
- For use with Bona primers
- TVOC 88.0 g/Lt (av all sheens)
- 8.5% total solvent content
- 8-10 m²/Lt coverage
- Drying time 3-4 hours
- 2.5 mg/100 rev wear resistance (SIS 923509)
- 2 sheen levels: Satin and Matt
- Gloss Level (60°):

Satin	45
Matt	15



Bona Traffic HD

For High Wear Resistance and Minimal Downtime

Ideal for commercial use in areas where downtime is limited and high wear resistance is a must. Bona Traffic HD (Heavy Duty) is a 2 component finish available in two sheen levels: satin and extra matt. Bona Traffic HD is designed to be used in commercial situations where the level of traffic and the use of the floor is at its most extreme.

Bona Traffic HD has all of the features and benefits of Bona Traffic, but has been specially formulated for added durability and wear resistance together with a much quicker curing time. Under reasonable conditions commercial floors can be put back into full use 24 hours after being completed.

Bona Traffic HD is the perfect choice for floors where extreme levels of traffic are expected such as retail shops, halls, museums, galleries and other public places.

Designed for extreme use commercial floors:

- 2 component water-based top coat
- 100% polyurethane
- Extreme wear resistance
- Non-toxic
- Non-yellowing
- For use with Bona primers
- TVOC 50 g/Lt (all sheens)
- 4.75% total solvent content
- 8-10 m²/Lt coverage
- Drying time 2-3 hours
- 1.5 mg/100 rev wear resistance (SIS 923509)
- 2 sheen levels: Satin and Extra Matt
- Gloss Level (60°):

Satin	45
Extra Matt	10



Bona Traffic HD Anti-slip

Walk Safe with Traffic HD Anti-slip

Bona Traffic HD (Heavy Duty) Anti-slip has been designed to give the benefits of Bona Traffic HD together with improved slip-resistance performance.

Bona Traffic HD Anti-slip is uniquely formulated with inert non-reactive slip-resistance particles, removing the need to add powder additives on site to achieve slip-resistance. Traffic HD Anti-slip surpasses the P3 rating required for floors and staircases in commercial and domestic buildings. At the same time HD Anti-slip gives excellent wear, scuff and scratch resistance together with a smooth-to-touch surface.

Traffic HD Anti-slip does not require the addition of any slip-resistance additives. Contractors simply apply the finish in the same way as Bona Traffic HD. Specifiers can be confident that every litre of finish applied to the floor will have exactly the same level of slip-resistance.

Specifiers should choose a P rated product, as detailed in AS 4586:2013, as these products may be tested on site, using the Pendulum test noted in Appendix A. This is becoming more common, particularly with local authorities, to verify the slip-resistance performance of a floor surface. With Bona Traffic HD Anti-slip the inclusion of the slip-resistant particles during production and the safety of having a rating in excess of P3 means that testing onsite can be confidently undertaken.

Traffic HD Anti-slip is ideal for applications where safety and anti-slip qualities are paramount such as staircases, aged care, entry foyers and reception areas, food courts, cafés and restaurants, public halls, hospitals, medical centres and other public places.

Designed for commercial Anti-slip applications:

- 2 component water-based top coat
- Non-toxic
- Non-yellowing
- Premixed - no need for the onsite addition of slip-resistance additives
- High durability and extreme scratch resistance
- Extremely quick hardness development (Possible to use floor in full use following day)
- Low odour
- DIBt approved for low indoor emissions
- P4 Slip-resistance according to AS 4586:2013
- For use with Bona primers
- TVOC 50 g/Lt (all sheens)
- 4.75% total solvent content
- 8-10 m²/Lt coverage
- Drying time 2-3 hours
- Available only in Matt
- Gloss Level (60°):
Matt 15



Bona Traffic Natural

The Feel of Pure, Natural Timber

Bona Traffic Natural could be called a designer finish because it allows timber floors to look and feel like nature intended. With its flat matt finish, Traffic Natural resembles raw untreated timber but with the protection only a polyurethane finish can provide.

Bona Traffic Natural is based on the unique Traffic formula to provide long-term durability and reliable results, but with a unique appearance and natural feel. Simply choose the appropriate primer for your timber and apply 1 or 2 coats of Bona Traffic Natural to meet the wear requirements of the floor. Then enjoy living with a timber floor which looks and feels... Natural.

Designed for natural look residential and commercial use:

- Preserves a look and feel similar to pure timber
- Ultra flat matt finish - approx. 6%
- Excellent protection for commercial and public areas
- 2 component water-based top coat
- Non-toxic
- Non-yellowing
- TVOC 80g/Lt
- 7.7% total solvent content
- 8-10 m²/Lt coverage
- Drying time 3-4 hours
- 2.5 mg/100 rev wear resistance (SIS 923509)
- Gloss Level 6 (60° & 85°)



Bona DriFast Stains

The Easy Way to Colour Your Floor

Bona DriFast Stain is based on a modified oil system which gives big advantages over traditional solvent based stains.

Using a 'traditional' system it is difficult to prevent overlaps and variation in colour as the stain penetrates immediately into the timber. Bona DriFast Stain avoids these problems with an open time of 3 minutes or longer depending upon the timber and site conditions. This allows blending of the colour from section to section across the floor.

Bona DriFast Stain has earned a great reputation for being easy to use, fast drying and avoiding lapmarks. Available in 15 inter-mixable colours, Bona DriFast Stain gives an infinite colour palette. You can mix any number of colours together to create the exact shade you desire.

DriFast Stain can be applied with a traditional wipe on - wipe off method or by using a slow speed buffing machine. Bona DriFast Stain is compatible with all Bona finishes and most colours can be over-coated just 2 hours* after application in reasonable conditions.

Easy to use and apply:

- 2 hour dry time for most colours*
- Coverage rate of 20–40 m² per litre
- No bleed back
- Available in 15 colours
- All colours can be blended, offering an endless colour palette

*Drying time is 6 hours for White & 18 hours for Ebony, Spice Brown and Cocoa or any mixes containing these colours. Additional details on the use of Bona DriFast Stain can be found at www.bona.com.au

Bona DriFast Stain Colour Chart



Floor Maintenance

Compatible Systems to Maintain and Extend the Lifespan of Bona Water-based Floor Coatings.

The care of timber floors is often overlooked or poorly implemented. To extend the life of any timber floor, proper cleaning and a preventative maintenance program is required. As the world's leading manufacturer of water-based floor coatings and a major supplier of finishes for prefinished engineered timber flooring, Bona offers an extensive range of floor care products. The range includes cleaning and refresher products, microfibre dust mops and cleaning mops with integrated spray application for both commercial and residential situations.

Our floor care products are easy to use and easy to find. The Bona floor care range of domestic products for timber floors is stocked in over 400 retail flooring outlets across Australia.



The Bona Spray Mop is a winner with home owners. Keeping residential floors looking good couldn't be easier.



The Bona floor care range includes everything needed to keep a timber floor looking great throughout its entire lifetime.

Download detailed cleaning and maintenance system information at bona.com.au

Bona is the Market Leader, All Around The World

With the experience and expertise that comes from being an international market leader, Bona has been manufacturing and supplying non-toxic water-based timber floor finishes for projects around the world since 1979.



Residence, Vienna Austria

Bona White and Traffic combined with Oak parquetry gives this classic residence a light and airy feel.



Nike Headquarters, Oregon USA

Bona Traffic was used to finish flooring at the home of one of the sporting world's iconic brands.



Winter Palace, Russia

An example of the artistry of hand cut parquet, the floors are coated with Bona Traffic to protect the centuries old craftsmanship.



National Portrait Gallery, London

Opened in 1896 the original Oak Herringbone floors in this heritage building in Trafalgar Square are protected against the 2.2 million visitors each year by Bona Traffic HD satin.



Residence, Auckland NZ

With the design palette based on a monochrome look Bona Mega matt was used to bring out the warmth and natural tones in the floor in this modern house in Auckland.



Parliament House, Canberra

Kings Hall is an original part of Old Parliament House. The Jarrah and Silver Ash flooring was refinished with Bona Traffic protecting the heritage floor against the 350,000 visitors each year.

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