ZWEIHORN

The Parquet Guide

www.zweihorn.com

AkzoNobel

Publication details

Great care was taken in preparing the contents of this brochure. We are nonetheless unable to assume liability for the accuracy, comprehensiveness or currency of this content. For the latest information on our products, as well as technical data sheets and safety data sheets, please visit us online at www.zweihorn.com. Any colour deviations present are due to the printing process.

Parquet Guide 2015, last updated 3 March 2015

Achieving the perfect wood or cork floor with high-quality oils and varnishes

Parquet has grown more popular over the years, not just as a cost-effective flooring with health benefits but often because people simply prefer the way it looks.

This Guide has been prepared by our team at AkzoNobel's Zweihorn® brand to inspire your parquet or cork laying and finishing projects. And we also want to give you some tips about renovating old floors and restoring them to their former glory.

The Zweihorn® brand has been part of the AkzoNobel Group since 2005. AkzoNobel is a leading company in the colours and paints industry, and a major manufacturer of special-purpose chemicals. AkzoNobel draws on its many years of experience to supply industry customers and consumers worldwide with innovative products and sustainable technologies that have been developed to meet the growing requirements of our rapidly changing world. The product portfolio includes brands such as Sikkens Wood Coatings, the premium brand for industrial wood surface coatings for wooden doors/windows and exterior applications, and Zweihorn®, both of which are leaders in their respective markets.

Our high-quality Zweihorn® finishing products for wood and cork floors ensure that the final protective coat is visually appealing. Achieving a perfect floor also requires proper preparation of the subfloor, which is why this Guide devotes plenty of space to discussing this important topic.

The right cleaning and care ensures that flooring will stay looking good for many years. Here we can offer you the right cleaning and care products from our Zweihorn® range, perfectly coordinated to the surface system in question.

Technical support

If you have any questions about using our products, please contact your personal adviser from our field sales team. This person will be happy to advise you in any questions related to surface finishing. Phone numbers are shown once you have entered your postcode on our Contact search page. Apart from the dealer address, details for Zweihorn® technical support are shown with mobile numbers.

You are also welcome to contact our Applications Engineering department:
Phone +49 (0)2103 77-482
Fax +49 (0)2103 77-622

Product safety

For all questions regarding health and safety, please contact our Product Safety department:
Phone +49 (0)2103 77-253
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General enquiries

For all other questions, please contact our main Call Centre:
Phone +49 (0)2103 77-800
Fax +49 (0)2103 77-577

General emergency number

Phone +49 (0)30 1 92 40 – Berlin Poison Centre

Basic parquet know-how

In recent years, there have been fundamental changes to consumer standards in our living spaces: in an era of mass production and climate change, we now focus increasingly on values such as individuality, healthy living and sustainability when choosing our furnishings and fittings. Parquet flooring is a good match for these needs and is the perfect choice for creating healthy, individual and aesthetically pleasing interiors. Parquet offers an impressive set of advantages, being durable, long-lasting and especially easy to care for. As a natural product, parquet is also eco-friendly and highly recommended for health reasons. You'll be amazed at just how versatile parquet flooring can really be!

Basic parquet know-how

Sustainable products

Climate protection is truly a topic for our times: ozone, particulate and CO_2 pollution threaten both human health and the environment. AkzoNobel's Zweihorn® brand realised the importance of this topic at an early stage, pushing ahead with environmentally friendly products entirely free of hazardous substances.

Water-based products

Water-based varnishes, in which organic solvents have been largely or entirely replaced by water, are the coatings of the future. Since only water is released when working with these varnishes, this protects both human health and the environment. In technical terms, the new high-tech water-based varnishes from Zweihorn® are equal to solvent-based coatings. They are outstandingly durable, offer exceptional scratch resistance and are far superior to earlier coatings in terms of hardness.

Products from natural raw materials

Natural products are the most environmentally friendly surface materials. They are manufactured from renewable resources and contain no harmful substances.
Zweihorn®-brand natural products can draw on almost a century of experience: they are technically advanced products
that contain only natural and renewable materials. The products contain no poisonous ingredients
or allergenic terpenes such as citrus terpenes and balsam turpentine, and they are entirely lead- and cadmium-free. As such, they are ideal products for use on children's furniture and toys.

Parquet and health

Parquet prevents the build-up of household dust mites while simultaneously insulating the room from cold and moisture when used with the right subfloor materials. The result is a homely and healthy living space.

Parquet creates a healthy indoor climate

If your parquet is oiled, then the wood remains permeable to vapour, meaning that it can absorb any excess moisture in the room air and release it again if necessary. This keeps your indoor climate optimal at all times – safeguarding your good health.

Parquet protects the environment – twice

Both solid and engineered wood flooring consists mostly of wood, a renewable natural resource. Trees bind CO_2 from the air by means of a chemical process that results in the creation of oxygen. These trees are later made into parquet flooring. After a very long useful life, it may be the case that the parquet floor is taken out rather than being restored. The floorboards then become scrap wood that can be used for heating. Parquet – simply perfect!

Parquet product advantages

Individual
Parquet can be used to achieve a truly individual interior design – offering a varied range of wood types, fitting methods (floorboards, vertical finger or mosaic parquet) and finishing techniques (varnished or oiled). The decision is entirely yours.

Hard-wearing
Once a wood or cork floor has been professionally coated then it can easily survive even the wildest party. The floor needs to be given at least three coats and not subjected to normal traffic for at least a month.

Long-lived
Parquet often outlives several generations of owners. Such a floor can not only easily last a century if properly treated and cared-for but can also be sanded down and re-sealed several times (assuming the top layer of the parquet is thick enough to do so).

Restorable
Wood parquet flooring can be sanded down and re-sealed several times – which means that wooden flooring offers much greater value for money than carpets!

Easy to care for
Wood and cork floors are easy to clean and maintain. They can be vacuumed like a carpet and mopped down to remove any soiling. A range of products are available for adding to the mop bucket: these soften the water to make cleaning more effective. And if the floor shows signs of wear, care products are available for restoring the floor to its earlier glory.

If you want unbeatable value for money, you want parquet!

Service for parquet fitters

Once you have read through the guidance on pages 12 and 13, and followed the detailed instructions for working with our products on the pages that follow, you will be impressed with the results – and naturally the products themselves!

Our website also offers you more information, instructions and tips for working with our products, plus safety data sheets. Go to the “Service” section for full details of our parquet range. To make it easier for you to find our great products, we have also included a stockist directory on our website. These dealers can also advise you on the right choice of product and answer any questions you might have about usage.

A full list of services is available online under www.zweihorn.com/de/service

Basic parquet know-how

Avoiding and repairing damage

For varnished floors:

Marks left by furniture

Cause: The varnish has not yet set properly. Furniture was brought into the room too early. Plasticiser migration from plastic castor cups.

How to avoid: Let the parquet coating dry out (cure) properly before usage (see technical data sheet). Use felt pads for furniture.

How to remedy: Sand down the entire floor and apply a new coat of varnish.

Dull areas

Cause: The varnish has been applied too thickly. This leads to more aggressive sanding of raised areas.

How to avoid: Matt sealing coatings must not be applied too thickly. The final sand must be performed evenly, without excessive pressure.

How to remedy: Sand down the entire floor to a matt finish and then apply a new coat of varnish.

Discoloration

Cause: Brownish-yellow wood discoloration due to alkalinity of water-based varnish.

How to avoid: Avoid pooling, to ensure that the water-base varnish doesn't react with the wooden surface. Use a specialised parquet primer.

How to remedy: Sand the entire floor down to the wood and seal again.

Poor drying/curing

Cause: Poor drying is a result of low temperatures and/or high relative humidity and/or coats of varnish applied too quickly. With two-component (2C) coatings, the mixing ratio may also be inaccurate.

How to avoid: Observe a minimum room temperature of +15 °C (optimal +18–25 °C) and relative humidity of under 70% (optimal 40–70%). Ensure room is well-ventilated – but without draughts! Do not apply varnish too thickly. For 2C coatings, use the correct ratio of coating to curing agent (weigh out).

How to remedy: Increase room temperature slowly and ensure good ventilation (without draughts).

Poor adhesion/white patches

Cause: Base coat and topcoat are incompatible. Different topcoats have been used. Lacquer sanding inadequate.

How to avoid: Only use coordinated lacquer systems from a single manufacturer. Ensure that the entire surface is properly sanded to finish.

How to remedy: Sand the entire floor down to the wood and seal again.

Joint shrinkage

Cause: The joint filler liquid was prepared with too much wood flour. This meant the ready-mixed filler had poor adhesion and was mostly stripped from the gaps by the final sand.

How to avoid: Don't add too much sanding dust to the joint filler liquid – the mixture must not be too dry! Don't forget that putty also picks up sawdust from surfaces during application.

How to remedy: Sand the entire floor down to the wood, fill the gaps and seal again.

Wrinkling

Cause: The last-but-one varnish layer is liquefying again, pulling upwards.

How to avoid: Always allow enough drying time between each coat of varnish! Remember that drying times will be longer at low temperatures and/or higher relative humidity.

How to remedy: Sand the entire floor down thoroughly to remove wrinkles and then apply a new coat of varnish.

Brush marks

Cause: Varnish has been applied unevenly. Poor workmanship can result in another coat of varnish being applied to already dry areas. Temperatures too high (> +25 °C).

How to avoid: Apply varnish evenly, avoid brush marks by always applying "wet to wet". For large areas, always work as part of a team. Do not coat floors at temperatures above +25 °C (tip: work early in the morning). Switch off underfloor heating well in advance of coating work.

How to remedy: Sand the entire floor down to the wood and seal again.

For oiled floors:

Varnish surface starts to soften

Cause: The plasticiser from a carpet backing (e.g.) has migrated into the varnish coat, softening it.

How to avoid: If carpets with PVC backing are going to be laid on the parquet floor, play it safe and use a 2C parquet varnish.

How to remedy: Sand down the entire floor and seal again.

Blistering

Cause: Direct sunlight, draughts or high temperatures (especially in summer).

How to avoid: Lower blinds to avoid the coating being exposed to direct sunlight. Do not coat floors at temperatures above +25 °C (tip: only work early in the morning). Underfloor heating must be switched off well in advance of coating work.

How to remedy: Sand the surface down using 150-grit paper to remove blisters and then apply a new coat of varnish.

Banding in wood

Cause: Sanding errors in wood, which result in dark discolorations.

How to avoid: The final sanding of the wood floor must be performed very carefully. For water-based varnishes, a graded wood finish with a 120-grit final sand is necessary (see also our sanding guidance from p. 14 onwards).

How to remedy: Sand the entire floor down to the wood and seal again.

Cumulative shrinkage (rafting)

Cause: High relative humidity while laying parquet; the wood's moisture content was too high during coating (should be max. 5–15%). Low relative humidity and/or high temperature: the wood releases its moisture and shrinks. Varnish in the gaps has edge-bonded boards together.

How to avoid: Only lay wood with a moisture content of 5–15%. Prevent sudden changes to the indoor climate. Use of a humidifier is recommended! Use a specialised wood primer to reduce the incidence of edge bonding.

How to remedy: Sand the entire floor down to the wood, fill the gaps and seal again.

Shiny/sticky areas

Cause: The oil has not been absorbed fully and has therefore dried onto the surface.

How to avoid: Remove the oil after the indicated amount of time and rub down with a cloth as an extra precaution.

How to remedy: Sand down the entire floor and oil again.

Spotting

Cause: Uneven wood sanding causes variations in the quality of oil absorption.

How to avoid: The final sanding of the wood floor must be performed both carefully and evenly. For oiling, a graded wood finish with a 180-grit final sand is necessary (see also our sanding guidance from p. 14 onwards).

How to remedy: Sand the entire floor back down to the bare wood and oil again.

Poor water resistance

Cause: Not enough oil has been applied to the wood.

How to avoid: The wood floor must be oiled until no more oil is absorbed and oil starts to "sit" on the surface. If the oil film starts to sag during the waiting time, more oil must be applied to this area. After the waiting time, ensure all excess oil has been properly removed.

How to remedy: Sand the floor to key up the surface and oil again until saturated.

Foot traffic wear

Cause: Oil application was inadequate, unprofessional care and cleaning.

How to avoid: Wood can handle heavy foot traffic over a prolonged period only if it has been properly saturated. The oiled floor must be cleaned regularly using Naturtrend Parquet Cleanser for oiled surfaces (approx. every 2–3 weeks) and, depending on the amount of traffic, freshened up every 2–3 months with Naturtrend Parquet Care for oiled surfaces. Depending on the amount of wear, the floor should also be re-oiled every 1–2 years.

How to remedy: Sand the entire floor back down to the bare wood and oil again.

Preparation

Preparation

The final finish given to the surface of a parquet floor is what really makes it stand out: it shows off the true beauty of the wood while making it easy to care for and hygienically clean.
However, a certain amount of preparation is required before you start to varnish or oil your wood or cork floor. The first step is to clear the entire room, before sanding the floor down and applying any coats of primer that might be necessary.

Sanding

All floors must be sanded down before a sealing coat is applied. With new flooring, this sanding will even out height differences between the strips of wood. For old floors, this process removes soiling and care product residues while sanding off any wear from foot traffic. Even for restoration work, we therefore recommend sanding right down to the bare wood. To ensure an optimum result is achieved, multiple sanding steps are required, each with a different grade (grit) of sandpaper. The exact number will depend on the degree of unevenness or soiling.

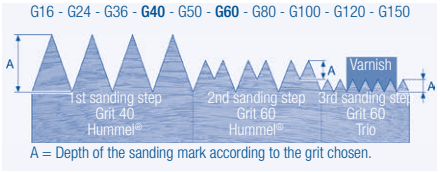
For further information about sanding parquet flooring, please consult the detailed sanding manual provided online by Laegler (www.laegler.com).

Going through the grits

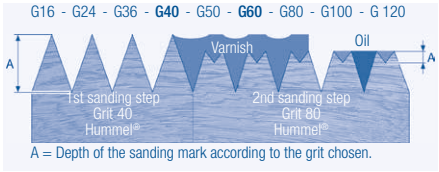
Achieving an optimum sanding result is crucially dependent on the right sequence of abrasive grit sizes, known as the “grit sequence”. This grit sequence and the number of sanding steps will depend on the size and number of protrusions between the individual wood elements, the degree of soiling and the unevenness of the wood flooring.

Pre-sanding

When pre-sanding with the HUMMEL®, one grit number can usually be skipped, but no more – since otherwise the removal of sanding marks from the previous grit number is impossible, or possible only with a major investment of time and material consumption. To keep sanding marks to a minimum, the first sanding step should be performed with as high a grit number as possible. This approach makes it easier to skip a sanding step, which not only improves workmanship but also reduces working time and material consumption.



Varnished surface if grit sequence chosen correctly



Defective varnished/oiled surface if wrong grit sequence chosen

Final sanding

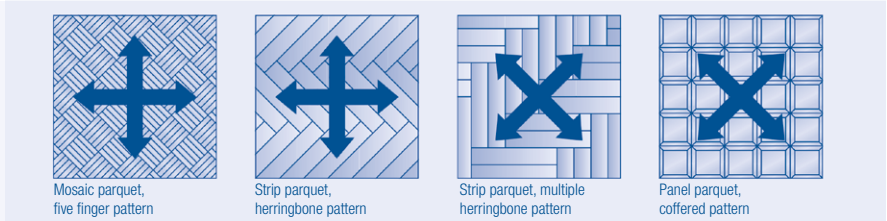
When using the TRIO for the finish, it makes sense not to skip any grit numbers. Since high grit numbers only take off a little material, the sanding marks from the previous sanding steps won’t be particularly coarse. If you do need to remove rougher sanding marks, the previous sanding step will need to be repeated.

Special notes

For hardwoods, less material is removed by sanding than from softwoods: accordingly, deeper sanding marks will require greater effort to remove. For very hard woods, such as some tropical species, it may therefore be advisable to choose a higher grit number than for softer woods from the outset. Sanding will be more effective if one or more steps are performed in a cross-wide direction.

Parquet types and fitting patterns with the same sanding direction

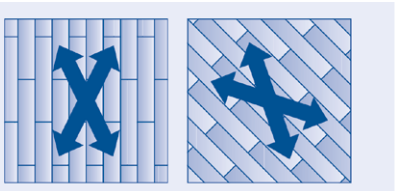
For the parquet types and fitting patterns shown in the figure, all sanding steps in pre-sanding and final sanding must be performed at an angle of 45° to the direction of the wood grain. This avoids gouging the surface.



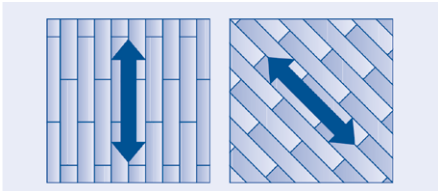
Sanding at 15–45 ° to direction of wood grain for all sanding steps.

Sanding directions for strip parquet and floor boards without cupping

For strip parquet laid longitudinally or floor boards, all sanding steps, except the final sand, must be performed at an angle of 15–45° to the direction of the wood grain. The more uneven the floor, the larger the angle should be to the direction of the wood grain. Exception: floor boards with excessive cupping. The last sanding step is then performed with the wood grain



Sanding at 15–45 ° to direction of wood grain for first to last-but-one sanding step.



Sanding direction parallel to wood grain for the last sanding step.

Note:

- For oiled surfaces, choosing the right grit sequence is even more important than for varnished surfaces, since even the finest sanding marks can negatively affect the final appearance. Also remember to always thoroughly vacuum off the surface and expansion gaps directly after completing each sanding step!
- These are excerpts from the sanding manual from Laegler. For more information and the complete manual, please visit www.laegler.com/downloads.

1. After completing preparatory work, coarse sand the floor in several steps (for grit size, see table on page 16). Always start on the left of the room. Switch the machine on and move it slowly forwards (for drum sanding machines, make sure you lower the sanding drum carefully onto the floor). Keep to the sanding direction shown in the diagrams on page 17!

When sanding backwards, always take the same path as sanding forwards. For drum sanders, always lift the drum when switching between forwards and backwards motion! Sand the next strip so that it overlaps with the previous strip sanded. Also stagger the starting position from sanding step to sanding step. The first complete sanding should remove all protrusions and soiling from the floor. If this is not the case, then the floor must be sanded again with the same grit, but rotated by 90°. Continue with step 2.

2. After step 1, about a metre of parquet is left unsanded in the area near the wall behind you. This area now needs to be sanded in the opposite direction. Sand so as to create a seamless border between the two areas that is invisible after oiling or varnishing.

Ideally, this area should be opposite the window facade (incident light). If this is not possible, please continue with step 3, otherwise proceed to step 4.

3. If there are any visible sanding marks between areas (turning points, etc.) from step 2, these must be corrected by hand. Perform all hand sanding in the direction of the original sanding. Continue with step 4.

4. Now use the edge sanding machine to sand down the edge areas. Start with the grit size from step 1 and work using a circular motion without excessive pressure. Then move to the next higher grit size (as described in the table on page 16). Vacuum the floor thoroughly between sanding steps.

5. Intermediate sanding should now be completed, again rotated at 90° to the previous sanding step. Please proceed as described in steps 1 to 4.

Caution: Keep the sanding dust to mix with the joint filler liquid! Before starting final sanding, vacuum the floor thoroughly to remove all dust.

6. Before starting the final sand, you must ensure all cracks and gaps are filled (see pp. 20–21). Note: ensure the joint filler is completely dry before sanding!

Caution: If any joint filler on the surface cannot be removed with the finest grit size, the area must be sanded down again with the grit size used for intermediate sanding. You can now perform the final sand (for grit size, see table on page 16). Work in the direction of the grain towards the light source, as described in step 1.

7. Now use the edge sanding machine to sand down the edge areas.

8. To exclude any possibility of visible borders between sanding steps, we recommend finishing the floor surface with a disc sander. After vacuuming, the floor is then perfectly prepared for varnishing or oiling.

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Tips:

- Don't stay in one place too long with the sander and don't switch directions if it is still running. Failure to do so can cause deep sanding marks or even singe the wood – and these marks are very hard to sand off again. Before stopping at the end of a sanding step, slowly raise the sanding drum or sanding disc from the floor.
- The best results are achieved by planning your sanding "paths" along the floor. Keep to the grit sequence where possible! Substandard sanding results cannot be corrected by the surface finish.
- Empty the sander's dust bag regularly before it starts to reach maximum capacity: this will keep suction power as high as possible. Don't throw away the sanding dust, however: keep it for adding to the joint filler liquid later.
- A delta sander (triangle sander) is an excellent choice for difficult-to-reach places such as corners or the area around radiators, etc.

Joint filler liquid

- Seals gaps and holes
- Reduces the risk of edge bonding
- For mixing with wood flour
- Simple to apply
- Fast-drying
- Easy to sand down

Cracks and gaps are created by fluctuations in temperature and relative humidity in the room. Often, these are only visible after sanding. Sealing cracks and gaps is the best way to stop sagging in the final topcoat. At the same time, this also minimises the risk of edge bonding (see diagrams on page 22).
For this step, it is essential that the mixture of joint filler solution and wood flour is prepared correctly. If the filler mix is too thin, it will drip and is more likely to edge bond the boards; if it is too thick, it can be stripped out of the gaps during sanding.

Available in 5 litre and 1 litre containers.

1. After intermediate sanding (step 5 on page 19), any cracks and gaps present in the floor must be closed using the joint filler liquid. Start by selecting a clean, empty container. Now mix the joint filler liquid with the wood flour (dust) from intermediate sanding in a ratio of 2:1 to 5:1 (depending on wood type). Ensure that the joint filler is neither too thick nor too thin.

Caution: While the filler is being worked, evaporation can change its consistency. If the filler starts to thicken, add joint filler liquid as necessary.

2. To ensure that all gaps and cracks are properly sealed, use a broad, flat (stainless!) steel palette knife to spread the filler evenly over the entire floor.

3. After the drying time of approx. 45 minutes (can also be longer, depending on temperature and relative humidity in the room), any larger cracks or gaps that show sagging must now be refilled as appropriate.

4. Before starting the final sand, you must ensure all cracks and gaps are filled. Note: ensure the joint filler is completely dry before sanding!

Caution: If any joint filler on the surface cannot be removed with the finest grit size, the area must be sanded down again with the grit size used for intermediate sanding. You can now perform the final sand (for grit size, see table on page 16). Work in the direction of the grain towards the light source, as described in step 1.

5. Now use the edge sanding machine to sand down the edge areas (for grit size, see table on page 16 for final sanding). To exclude any possibility of visible borders between sanding steps, we recommend finishing the floor surface with a disc sander.

After vacuuming, the floor is then perfectly prepared for varnishing or oiling.

Tips:

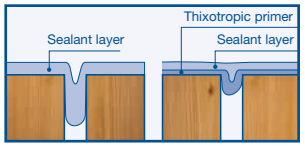
- Ensure that lumps of filler do not dry onto the floor's surface! These kind of lumps will be very hard to sand off again. Any areas not sanded off will also lead to discoloration in the topcoat. Always scrape the surface clean with the palette knife and sand down well after drying.
- Do not use joint filler on old wood floors with oversized gaps – such as simple floor boards. This also applies to wood floors laid over an elastic subfloor – such as floors used for sports. Filler used here will eventually crack and fall out.

Unocryl 1C Parquet Primer

- For Unocryl and Duocryl parquet varnishes
- Reduces the risk of edge bonding
- Minimises wood discoloration
- Simple to apply
- Fast-drying
- Easy to sand down

Before applying a water-based sealant, the floor should be painted with a special parquet primer. This reduces the risk of wood discoloration. Note: do not use this primer on surfaces that have been stained! For these surfaces, coat directly with Unocryl or Duocryl parquet varnish. As Unocryl 1C Parquet Primer does not penetrate deeply into gaps in the parquet, it is less likely to stick boards together. This reduces the risk of edge bonding (see diagram 1). If temperatures and relative humidity fluctuate, edge bonding will lead to irregular gaps ("rafting") between boards (see diagram 2).
Another good approach to avoiding edge bonding is simply to close the gaps with Zweihorn® joint filler liquid.

Diagram 1



Sealant layer with and without primer

Diagram 2

Irregular gaps formed due to edge bonding

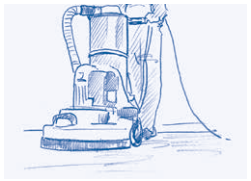
Available in 5 litre and 1 litre containers.

For details of relevant standards, see page 42.

1. Before you apply the sealing coat, you need to remove the dust produced by sanding. Dust off picture frames, window sills, door frames, etc. and then vacuum the floor thoroughly. Then wipe down the floor with a clean, damp cloth (moist only, not dripping).

Caution: Take care to ensure that your shoes are clean, with no splinters, etc. sticking in the soles.

2. Now apply the parquet primer, using as thin a coat as possible. Apply with a special roller (pile height 2–5 mm) or a whitewash brush for water-based varnishes. Don't simply tip the primer onto the wood but use a paint tray or something similar. Leaving the primer on the wood for too long can cause discoloration! Work away from the light, to ensure that you can spot errors in the sealant immediately and correct them before the primer dries out. Work in a "path" about 1.5 m wide, using only moderate pressure – first at 90° and then parallel to the grain. Ensure the next path overlaps with the last within 5 minutes, to avoid creating visible brush marks. Use a paintbrush to work on hard-to-reach areas. Clean working utensils thoroughly with water and stow away in an air-tight container (e.g. plastic bag) for further use.



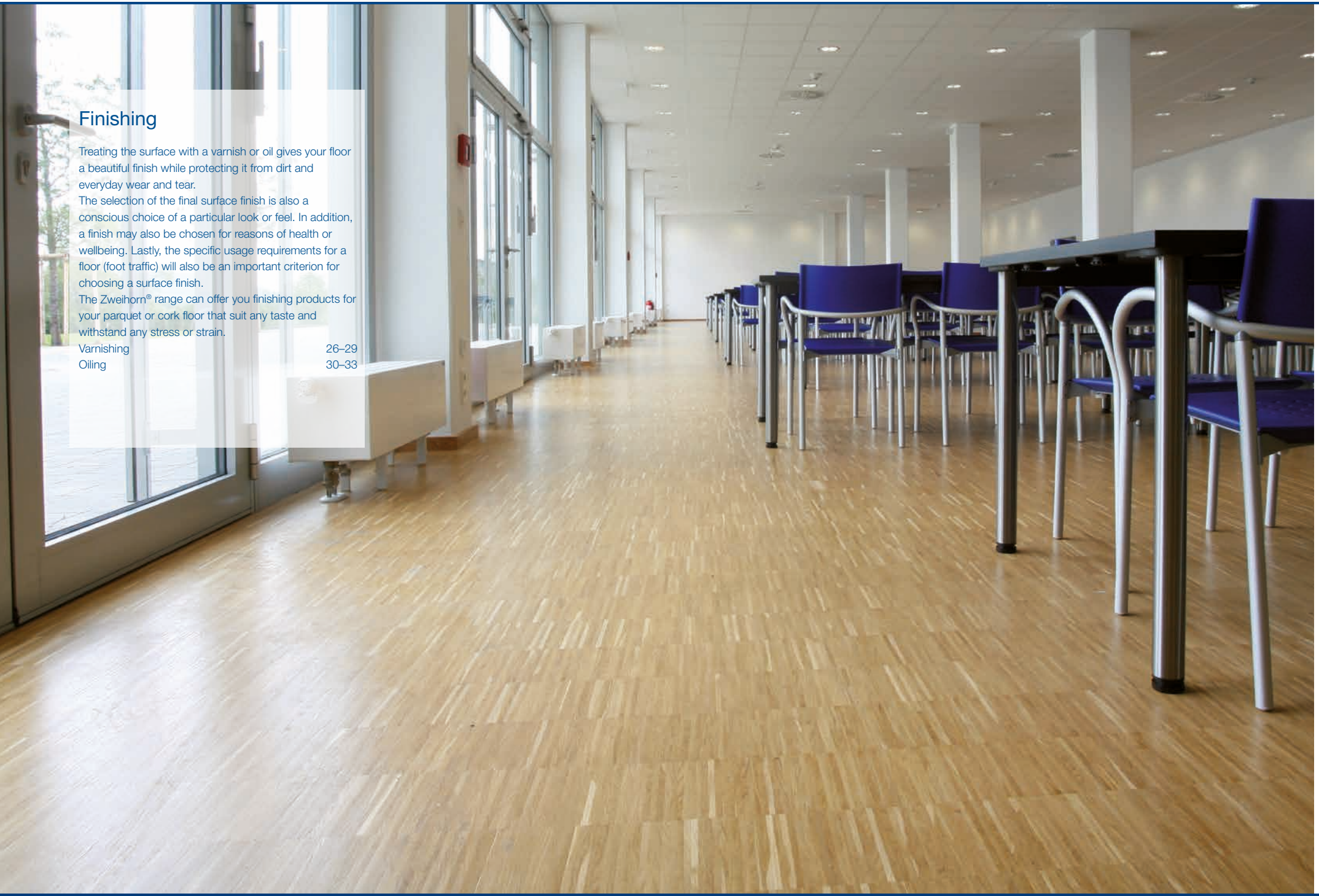
3. After a drying time of about 60–90 minutes, the sealed floor can then be sanded down. To do so, use a disc sander, starting with 150-grit abrasive discs and finishing with brown (fine) abrasive pads. Sand to an even finish using only moderate pressure (don't wear away the primer). The entire floor should now have a matt finish. Vacuum off the floor and wipe it down with a tack cloth. You can now apply a coat of Unocryl 1C Parquet Varnish or Duocryl 2C Parquet Varnish (for details, see pp. 28–29).

Continue with step 2/3 on page 28.

Tips:

- If the room is fairly large, consider working in a team of two or more to ensure that brush marks are not created by varnish drying out between overlaps.
- Good air exchange will accelerate the drying of the varnish. Take care to avoid draughts, however, as otherwise the surface will harden too quickly, creating unsightly ripples. (Use draught stoppers on doors!)
- Varnishing is not recommended at extreme summer temperatures of over +25 °C, since rapid drying can lead to rippling, brush marks or air bubbles being trapped under the varnish coat. Work early in the morning – and keep window blinds rolled down!

Finishing



Finishing

Treating the surface with a varnish or oil gives your floor a beautiful finish while protecting it from dirt and everyday wear and tear.
The selection of the final surface finish is also a conscious choice of a particular look or feel. In addition, a finish may also be chosen for reasons of health or wellbeing. Lastly, the specific usage requirements for a floor (foot traffic) will also be an important criterion for choosing a surface finish.
The Zweihorn® range can offer you finishing products for your parquet or cork floor that suit any taste and withstand any stress or strain.

Unocryl 1C Parquet Varnish

- For cork, parquet, wood staircases and furniture
- Suitable for residential use
- Good hardness and scratch resistance
- High abrasion resistance
- Easy to work
- Fast-drying

Zweihorn® parquet varnishes put the finishing touches to your parquet or cork floor after priming with Unocryl Parquet Primer. The varnish layer provides the floor with a tough topcoat that protects it from wear and tear while also increasing its visual appeal. Whether you choose matt or satin, Unocryl 1C Parquet Varnish can be used to finish not just residential floors but also wood staircases, since it can be assumed that these surfaces will be walked on in slippers or stocking feet. Note: wood that has been thermally or chemically treated cannot be finished with Unocryl parquet varnishes!

For details of relevant standards, see page 42.

Available in 5 litre and 1 litre containers.

Duocryl 2C Parquet Varnish

- For cork, parquet, wood staircases and furniture
- Suitable for commercial use
- Very good hardness and scratch resistance
- Extremely high abrasion resistance
- Fast-drying
- Must be used with a curing agent
- Mix 20:1 with PWH 3200 PUR water-based varnish curing agent

Zweihorn® parquet varnishes put the finishing touches to your parquet or cork floor after priming with Unocryl Parquet Primer. The varnish layer provides the floor with a tough topcoat that protects it from wear and tear while also increasing its visual appeal. Duocryl 2C Parquet Varnish can be used to finish both floors and wood staircases in residential and commercial properties that are exposed to greater wear and tear. Note: wood that has been thermally or chemically treated cannot be finished with Duocryl 2C parquet varnishes!

Note:

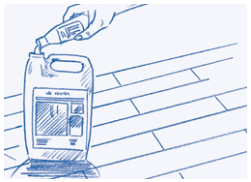
- Duocryl 2C Parquet Varnish is available to trade customers only.

For details of relevant standards, see page 42.

Available in 5 litre and 1 litre containers.

1.

Before you apply the sealing coat, you need to remove the dust produced by sanding. Dust off picture frames, window sills, door frames, etc. and then vacuum the floor thoroughly. Then wipe down the floor with a clean, damp cloth (moist only, not dripping).
Caution: Take care to ensure that your shoes are clean, with no splinters, etc. sticking in the soles.

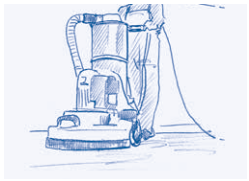


2.

If you have decided to provide your floor with a hard-wearing Duocryl 2C Parquet Varnish topcoat, you must first mix the varnish with curing agent before starting work. To do so, create a 20:1 mix by adding the complete contents of the curing agent bottle to the container, then close and shake it for at least 15 seconds. Then let the container stand for 5 minutes to let any trapped air escape. Note: the container must not be re-sealed after the curing agent has been added! Always mix the right amount of varnish that you need for the coating job in question: use a separate container if necessary. Leave residues to harden in the container. Note: you have only 2 hours to complete work with Duocryl 2C Parquet Varnish after mixing!

3.

You can now use Unocryl 1C Parquet Varnish or Duocryl 2C Parquet Varnish to apply the first topcoat. With Duocryl 2C Parquet Varnish, you must first mix the varnish with curing agent before starting work. Apply with a special roller (pile height 2–5 mm) or a whitewash brush for water-based varnishes. Don't simply tip the varnish onto the primed wood surface but use a paint tray or something similar. Work calmly, so as to keep the amount of air trapped in the varnish to the absolute minimum. Work away from the light, to ensure that you can spot errors in the sealant immediately and correct them before the primer dries out. Work in a "path" about 1.5 m wide, using only moderate pressure – first at 90° and then parallel to the grain. Ensure the next path overlaps with the last within 5 minutes, to avoid creating visible brush marks. Use a paintbrush to work on hard-to-reach areas. Clean working utensils thoroughly with water and stow away for further use in an air-tight container (e.g. plastic bag).



4.

After a drying time of about 4–6 hours, the sealed floor can then be sanded down. To do so, use a disc sander fitted with 150-grit abrasive discs. Always use new sandpaper! Vacuum off the floor and wipe it down with a tack cloth. The floor should have an even, matt finish. If this is not the case for any areas, these must be re-sanded, so as to "key" the surface for the next coat of varnish.

5.

You can now apply a second coat of Unocryl 1C Parquet Varnish or Duocryl 2C Parquet Varnish (as described in steps 3 and 4). Do not apply more than two coats (including primer) per day, however, since the excessive coating thickness will slow down drying times. If the floor has not been primed before coating with Unocryl 1C Parquet Primer, then the floor must be given a third coat of varnish – and a fourth coat for non-residential floors (as in steps 3 and 4).

Tips:

- If the room is fairly large, consider working in a team of two or more to ensure that brush marks are not created by varnish drying out between overlaps.
- Good air exchange will accelerate the drying of the varnish. Take care to avoid draughts, however, as otherwise the surface will harden too quickly, creating unsightly ripples. (Use draught stoppers on doors!)
- Varnishing is not recommended at extreme summer temperatures of over +25 °C, since rapid drying can lead to rippling, brush marks or air bubbles being trapped under the varnish coat. Work early in the morning – and keep window blinds rolled down!
- Do not cover the floor with any porous material or apply any adhesive masking tape!
- After applying the last coat, avoid all traffic on the surface for at least eight hours. Wait at least 24 hours before placing furniture on the floor and wait one week before laying rugs. Use felt pads underneath furniture – do not use PVC castor cups! Wait at least one month before cleaning with water and Procryl Parquet Cleanser.

Naturtrend Project Oil

- For cork, parquet, wood staircases and furniture
- Suitable for residential and commercial use
- Wax ingredients provide a satin shine
- Contains no allergenic terpenes
- Easy to work
- Fast-drying

Oiling gives your parquet/cork flooring or staircases a luxurious finish. The oil penetrates deep into the wood, to protect it from within (impregnation). The major advantage of oiling is that the wood stays porous (permeable to vapour). This means that the wood can absorb excess moisture from humid air and release it back into the room as needed – so as to ensure an optimum indoor climate. Naturtrend Project Oil can be used to finish both floors and staircases in residential and commercial properties that are exposed to greater wear and tear. However, note that regular cleaning, maintenance and timely re-oiling will also be required!

Material required:

5 l are enough for 40–75 m² per oiling step (2–3 recommended) and 0.75 l is enough for approx. 6–11 m² per oiling step (2–3 recommended), depending on wood absorbency.

Available in a 5 litre and 750 ml container.

For details of relevant standards, see page 42.

1. Before you start oiling, you need to remove the dust produced by sanding. Dust off picture frames, window sills, door frames, etc. and then vacuum the floor thoroughly. Then wipe down the floor with a clean, damp cloth (moist only, not dripping).
Caution: You can (and probably will need to) walk on the oil-soaked floor. You should therefore tie clean cotton cloths (e.g.) over your shoes.

2. Apply the Naturtrend Project Oil with an oil-resistant roller or a paintbrush to create an even coat of wet oil. Oil absorption rates will depend on the type of wood. Re-apply oil immediately to any places where the wood appears dry. And continue to do so until the oil stays on the surface as an even film. Start by working away from the light, so you can immediately see where the wood is absorbing oil more quickly and needs re-oiling. Work in a "path" about 1.5 m wide, from left to right and using only moderate pressure.

3. After a waiting time of about 30 minutes, any oil remaining on the surface must be completely removed. The best tool for this job is a rubber or foam rubber squeegee. Mop up the collected pools of oil with a cotton cloth.

4. The remaining oil is now worked in by hand with a cloth or with a single-disc machine (using a white or green pad) until the surface appears completely dry.
Caution: Absolutely no oil film must be visible on the surface! Leave to dry overnight and then repeat steps 2 to 4. Depending on the absorbency of the wood and future foot traffic it may require a third oiling step (see steps 2 to 4).

Tips:

- If the room is fairly large, consider working in a team of two or more to ensure that any dry areas can be immediately re-oiled as necessary.
- Good air exchange will accelerate drying. Take care to avoid draughts, however, as otherwise the oil will dry too fast, leading to poor absorption. (Use draught stoppers on doors!)
- If you want to use the roller or paintbrush for the next application of oil, you must carefully rinse these off using white spirit or turpentine substitute.
- Do not cover the floor with any porous material or apply any adhesive masking tape!
- After applying the last coat, avoid all traffic on the surface for at least eight hours. Wait at least 24 hours before placing furniture on the floor and wait one week before laying rugs. Use felt pads underneath furniture – do not use PVC castor cups! Wait at least 8–10 days before cleaning with water and Naturtrend Parquet Cleanser.

Naturtrend Hard Wax Oil

- For all interior wood surfaces
- Also for cork, parquet and wood staircases
- Wax ingredients provide a satin shine
- Easy to work
- Fast-drying
- Highly moisture-repellent
- Suitable for use in rooms with high humidity
- Contains no allergenic terpenes

Naturtrend Hard Wax Oil is a surface protection product with a natural wood appearance (does not accentuate grain/texture) based on high-quality oils and waxes. It has good filling properties, excellent absorbency and gives the surface a premium appearance combined with an especially pleasant, natural haptic appeal. It is easy to work with, moisture-repellent, hard-wearing and can be applied to any interior wood surface. Naturtrend Hard Wax Oil contains no toxic substances or allergenic terpenes (e.g. citrus terpenes, balsam turpentine, etc.).

It consists of non-aromatic hydrocarbons, sunflower oil, rapeseed oil, safflower oil, soy oil, shellac wax, candelilla wax, carnauba wax, microcrystalline wax and lead-free dry matter (see section “Health and safety”).

Working instructions:

0.75 l is enough for approx. 7.5–15 m² per oiling step (2–3 recommended). Accordingly, 5 l are enough for an area of approx. 50–100 m² per oiling step (2–3 recommended), depending on the absorbency of the wood. Shake and/or mix thoroughly before use! Working temperature: max. 45 °C.

Shelf life:

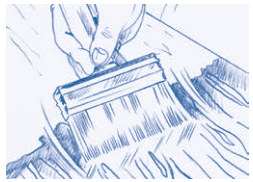
24 months in sealed original packing. Keep between +10 °C and +30 °C for storage and transportation.
Frost-sensitive!

For suggested working techniques for finishing flooring with Naturtrend oils, please see the Parquet Finishing Guide from Zweihorn® (available from your Zweihorn® stockist or as a download from “Leaflets and guides” at www.zweihorn.com/en/downloads).

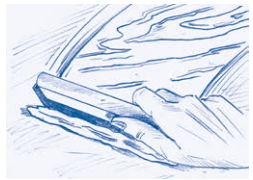
Available in a 5 litre and 0.75 litre container.

For details of relevant standards, see page 42.

1. Before you start oiling, you need to sand down the surface as described in chapter 2 (preparation). Then vacuum off the surface to remove wood dust.



2. Shake or stir the oil thoroughly before use. Apply the oil with an oil-resistant paintbrush or roller evenly to create a wet, saturated film on the wood. Oil absorption rates will depend on the type of wood. Re-apply oil immediately to any places where the wood appears dry. This step must be repeated until the oil remains on the surface as an even film. Start by working away from the light, so you can immediately see where the wood is absorbing oil more quickly and needs re-oiling.



3. After a waiting time of about 10–15 minutes, any excess oil must be completely removed. To do so, scrape the surface off with a clean, colourfast squeegee or window wiper. (Absolutely no oil film must be visible on the surface!)

4. Leave to dry overnight and then perform an intermediate sanding step (320/400-grit or a fine sanding sponge). Now apply a second, thin coat of the oil, and then polish the surface using a random orbit sander with a white pad.

Caution: For surfaces subject to heavy wear and tear (e.g. in bathrooms), more than 2 coats will be needed.

Tips:

- For the second coat of oil, one option is to spread the oil in a thin and even coat with a paintbrush and then leave it in a film on the floor surface. This creates a more hard-wearing protective coat. When spreading the oil with the brush, dab the brush off on a cloth now and again to ensure any excess oil can be taken up properly. This is especially recommended for vertical surfaces.
- If you want to use the roller or paintbrush for the next application of oil, you must carefully rinse these off using white spirit or turpentine substitute. (If you want to use the exact same product again later, then you can also stow the brush or roller away in an airtight plastic bag.)

Care and cleaning

Care and cleaning

Professional cleaning and care makes all the difference to the lifetime of varnished or oiled surfaces. The frequency of this work will naturally depend on your property, usage patterns, activity (wear and tear) and soiling. Rooms that are used much more often – such as a kitchen – will obviously need cleaning and care more frequently than a study or a bedroom, for example.

Always use cleaning and care products that are suitable for your surface. Procryl can be used on all varnished surfaces, Naturtrend on all oiled surfaces.

Procryl Parquet Cleanser

- For varnished surfaces and laminate flooring
- Clean and care in one step
- Creates a non-slip, antistatic film with a satin finish
- Improves resistance to wear and tear

Flooring that has been finished with Unocryl 1C Parquet Varnish or Duocryl 2C Parquet Varnish is easy to care for and very hard-wearing. However, dust, soiling and tracked-in sand can still dirty or even scratch the surface. But help is at hand from these two high-tech products. With Procryl Parquet Cleanser, the surface is gently yet thoroughly cleaned, while Procryl Parquet Care restores a worn floor to its original shine, making small scratches invisible again.

Naturtrend Parquet Cleanser

- For all oiled and waxed surfaces
- A natural product that cares for the wood as it cleans
- No artificial fragrances added
- For regular wet cleaning

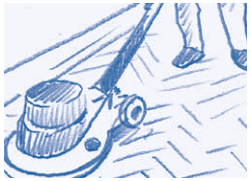
Parquet/cork floors and staircases finished with Naturtrend Project Oil stay beautiful for longer if they are regularly cleaned and maintained. Naturtrend Parquet Cleanser gently cleans oiled surfaces, while Naturtrend Parquet Care provides surfaces subject to wear and tear with all of the active ingredients they need to retain their satin shine. Even so, oiled surfaces also need re-oiling from time to time to prevent permanent patches of wear or scuff marks from appearing.

Available in a 1 litre container. Available in a 500 ml container.

1. Clean the floor daily with a mop, a soft broom or a vacuum cleaner, and always immediately before you plan to apply Procryl Parquet Cleanser or Naturtrend Parquet Cleanser to the floor.

2. Procryl Parquet Cleanser:
Add an appropriate amount of Procryl Parquet Cleanser to the mopping water.
For normal soiling:
200 ml Procryl Parquet Cleanser for 10 litres of water.
For heavy soiling:
500 ml Procryl Parquet Cleanser for 10 litres of water.
The mopping water must be applied so the mop is not dripping. Use two buckets: one for the clean soap solution and the second for the dirty water. Our Procryl Parquet Cleanser is also suitable for use in cleaning machines, and can also be used to clean brick and stone floors.

Naturtrend Parquet Cleanser:
Add an appropriate amount of Naturtrend Parquet Cleanser to the mopping water.
For normal and heavy soiling:
250 ml Naturtrend Parquet Cleanser per 10 litres of water for oiled floors and 30 ml/10 litres for waxed floors. The mopping water must be applied so the mop is not dripping. Use two buckets: one for the clean soap solution and the second for the dirty water. Do not mop with plain water at the end – this removes the protective film!



3. Naturtrend Parquet Cleanser only:
After a drying time of approx. 30 minutes, the floor surface should then be polished with a single-disc polishing machine (white pad) or a coarse cotton cloth. Never use plain water to mop the floor after polishing!

Procryl Parquet Care

- For varnished surfaces and laminate flooring
- Restores the shine
- Protects the floor's topcoat in areas with heavy foot traffic
- Does not need a final polish

Flooring that has been finished with Unocryl 1C Parquet Varnish or Duocryl 2C Parquet Varnish is easy to care for and very hard-wearing. However, dust, soiling and tracked-in sand can still dirty or even scratch the surface. But help is at hand from these two high-tech products. With Procryl Parquet Cleanser, the surface is gently yet thoroughly cleaned, while Procryl Parquet Care restores a worn floor to its original shine, making small scratches invisible again.

Naturtrend Parquet Care

- For all oiled and waxed surfaces
- Natural care product with high wax content
- Thin before use on dark surfaces
- Can be polished to a gloss finish

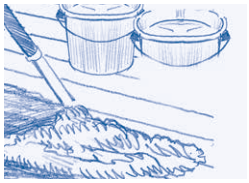
Parquet/cork floors and staircases finished with Naturtrend Project Oil stay beautiful for longer if they are regularly cleaned and maintained. Naturtrend Parquet Cleanser gently cleans oiled surfaces, while Naturtrend Parquet Care provides surfaces subject to wear and tear with all of the active ingredients they need to retain their satin shine. Even so, oiled surfaces also need re-oiling from time to time to prevent permanent patches of wear or scuff marks from appearing.

Available in a 1 litre container. Available in a 1 litre container.

Care and cleaning

Cleaning | Maintenance | Restoring

1. Clean the floor daily with a mop, a soft broom or a vacuum cleaner, and always immediately before you plan to apply Procryl Parquet Care or Naturtrend Parquet Care to the floor.



2. Procryl Parquet Care:
Perform cleaning as described above before applying this care product. After cleaning, apply an even coat of Procryl Parquet Care with an absorbent, damp wad of cloth or a damp mop. The floor is finished after a drying time of approx. 30 minutes. A final polish is not necessary.

Naturtrend Parquet Care:
Perform cleaning as described above before applying this care product. After cleaning, apply an even coat of undiluted Naturtrend Parquet Care, using an absorbent waffle-weave or cotton cloth or a damp mop. Note: for dark floor surfaces, Naturtrend Parquet Care must be diluted with up to 70% water!

3. After a drying time of approx. 30 minutes, the floor surface should then be polished with a single-disc polishing machine (white pad) or a coarse cotton cloth. Do not use water at all!

Naturtrend Oil Refresher

- For the restoration and care of oiled wood and cork surfaces
- Can be used on any oil product
- For re-oiling surfaces pre-oiled at the factory
- Restores freshness and shine
- Forms a protective film

Naturtrend Oil Refresher is an oil care product designed for use in restoring, refreshing and maintaining any interior oiled wood or cork surface. The light oil texture means it can be used on any surface treated with Naturtrend oils or with any other commercially available oil products. Naturtrend Oil Refresher nourishes the wood, returning the floor to its original saturation, shine and freshness after just one application. Where the original oil film has faded slightly or shows signs of wear in places, Naturtrend Oil Refresher can avoid a situation where the entire surface has to be treated again.

Material required:

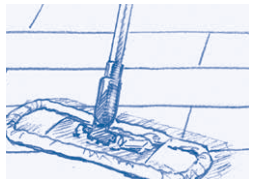
500 ml Naturtrend Oil Refresher is enough for refreshing an oiled surface of around 20 m².

Available in a 500 ml container.

Care and cleaning

Cleaning | Maintenance | Restoring

1. Before applying Naturtrend Oil Refresher, the floor must first be properly cleaned to remove all dust and dirt. To do so, vacuum the floor thoroughly and/or clean the floor with a damp (not dripping), lint-free floor cloth. Let the floor dry off before application.



2. Apply the oil refresher sparingly to a floor wiper pad and then wipe down the entire floor to create an even film.

3. Let the refresher soak in for 10 minutes and then rub the floor down with a single-disc sander and a white pad (or use a wad of cloth), so that the oil film is no longer visible and the floor surface appears dry. After treatment with Naturtrend Oil Refresher, leave the product to cure for at least 24 hours. Protect from water during this time! Finish by polishing with a white pad.

Tips:

- The effect produced by Naturtrend Oil Refresher will depend on the surface it is used on. We therefore recommend testing a small sample on an inconspicuous part of the floor before treating the entire surface.
- To retain the natural beauty of your floor for as long as possible, we recommend cleaning and care with Naturtrend Parquet Cleanser and Naturtrend Parquet Care.

Testing standards are extremely important for coating products. Testing standards give you peace of mind by confirming the quality and special properties of the products they are used to certify. Even the most stringent requirements (resistance to chemicals or wear and tear, flame retardant properties, etc.) from clients, architects or even tender specifications can be appropriately fulfilled.

All tests are performed without exception on coatings that are properly cured.

DIN 4102 – applicable standard in Germany for reaction to fire/flame retardant properties
ABP – General Appraisal Certificate
A standard covering building materials, parts and products used in public and private buildings (e. g., walls, ceilings, interiors, stairs, etc.)
Validity: Paints/varnishes having a General Appraisal Certificate may be used for building materials according to building rules list A, part 2, issue 2006/1, section 2.10.2.
Construction products used in public buildings must have a General Appraisal Certificate. These paints/varnishes are subject to external quality control. To fulfil the testing criteria, flame-retardant varnishes/paints certified to DIN 4102-B1 must be used on wooden particle board (incl. veneered board) or MDF board also tested to the DIN 4102-B1 standard. On other substrates, only DIN 4102-B2 is considered to be fulfilled.
Products must be applied in quantities exactly as specified. Reaction to fire classification to DIN 4102 Part 1:
Building product class A = Non-combustible
Building product class B = Combustible
Building product class B1 = Flame-retardant
Building product class B2 = Normally combustible
Building product class B3 = Easily combustible

DIN EN 13501-1 – applicable standard in Europe for reaction to fire/flame retardant properties
Reaction-to-fire classification of building products and construction techniques for buildings (e.g. walls, ceilings, interiors, stairs, etc.). Applicable in all European countries. Applies specifically to public buildings such as airports, etc. To fulfil testing criteria, flame-retardant paints/varnishes certified to DIN EN 13501-1 must be applied to the substrates specified in the test certificate. Use on other substrates is prohibited. Products must be applied in quantities exactly as specified.

DIN 5510 – Preventive fire protection in railway vehicles, Part 2: Fire behaviour and fire side effects of materials and parts
This standard specifies the requirements deemed necessary for the fire behaviour and fire side effects (smoke and burning droplets) for the materials and parts used in the construction of railway vehicles.

EN 71-3 – European standard – Migration of heavy metals/chemical elements (used for the testing of children's toys, for example)
EN 71 part 3 specifies requirements for the migration of harmful substances in coatings (heavy metals such as lead, chromium, cadmium, barium, etc.). An extraction is used to simulate a digestion process, to provide information about the solutes. A quantitative analysis is made of elements demonstrably extracted. Exposure limit values of hazardous substances must not be exceeded.

DIN 68861 – Resistance of furniture surfaces
This comprehensive, multi-part standard is used to test resistances to e.g. the effects of heat (dry and humid), aggressive chemicals, scratching, wear and tear and cigarette burns.

DIN 68861 Part 1: Chemical resistance
Classification of resistance groups:
1A = Most resistant group to
1F = Least resistant group
Example: Chemically cured two-component paint/varnish
coatings are classified as resistance group 1B. Paints/varnishes that only dry physically (by evaporation) are typically classified no higher than group 1C. The tests are carried out with 26 different test substances, such as beverages, solvents, acids, common household detergents, etc.

DIN 68861 Part 2: Abrasion resistance
Tests resistance of painted/varnished surfaces to abrasion with the "Taber Abrader": no. of revolutions to achieve 50% wear-through with specified sandpaper.
2A = Most resistant group to
2F = Least resistant group

Tox Control – The quality mark for low-emission furniture coatings
Due to interactions between pollutants in indoor environments, even low quantities of such substances can produce symptoms such as headache, lack of concentration and irritation of the lungs and respiratory tract. Since many of these hazardous substances may also originate from furniture, the release of pollutants is examined by the test for the TÜV Tox Control quality mark. The list of test criteria for furniture and all associated parts and cured coatings contains the following main points:
- Formaldehyde content ≤ 0.05 ppm after 28 days
- Phenol content ≤ 14 µg/m³
- Isocyanate content ≤ 0.1 µg/m³
- Solvent residues/volatile ≤ 0.8 mg/m³ organic compounds (VOC) Sum of all individual substances
- DIN 53160
- EN 71-3/9

Non-slip properties according to BGR 181 and DIN 51130
During this test, test persons with test shoes and a specified rubber sole walk on the flooring to be tested, which has been coated with engine oil. The slope of the floor is increased until the test person slips (= angle of acceptance). The average angle of acceptance is classified into evaluation groups R9 to R13.

For Zweihorn® products provided with the compliance mark (Ü), CE marking can be requested for structural components such as parquet, stairs, etc. This compliance mark (Ü) is awarded to building products (parquet and other coatings, care products and adhesives, wood flooring) that meet the health protection requirements defined in the technical specifications from the German Institute of Construction Engineering (DIBT).

Institut für Baubiologie Rosenheim GmbH
Quality certification mark for non-toxic and ecologically sound building materials and furnishings. The mark is awarded to products that create safe and non-toxic living environments while also working to protect the environment.

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