



TDS

TECHNICAL DATA SHEET

ARMOURFLEX UV PROTECTION OIL



DESCRIPTION

A technically crafted blend of natural oil and resins for wood, with a specialised UV absorber to shield against sun, rain and everything in between.

PRODUCT INFO

ArmourFlex UV Protection Oil contains a careful balance of UV absorbers and antioxidants, designed to capture the damaging UV rays from the sun and dissipate them safely as heat. In this way, the ArmourFlex UV Protection Oil is able to defend the wood against greying and impart a subtle, enhanced warmth to its appearance. As a sacrificial product, the coating will become less effective over time (approx. 2 years depending on elevation and weather conditions), but a fresh maintenance coat can be easily reapplied.

Water-repellent oil and resins help to protect against warping and twisting (depending on wood type & quality of the wood. Oak as an example can naturally be inclined to twist and split). The surface biocide in the UV Oil helps prevent mould, fungi, and algae growth. Together, these form a microporous shield suitable for all exterior wood, especially external joinery, luxury cabins and wooden cladding. Armourflex UV Protection Oil can also be applied to internal wooden surfaces that are at risk of UV fading such as internal window sills.

AREA OF USE/COMPATIBILITY

Suitable for exterior use on all types of natural wood, including softwoods and hardwoods. Also suitable for modified/acetylated wood. UV protection oil can also be applied to internal wooden surfaces that are at risk of UV fading such as internal window sills. Can be used on engineered wood products such as plywood and OSB, providing they are modern. Older engineered wood, e.g., antique veneers, may contain glue which is susceptible to the solvents present. If you intend to apply Armourflex UV Protection Oil on to Fire protected cladding, consult with the cladding manufacturer first. Compatible with the following Barrettine products, once dry:

- Barrettine Universal Preserver
- Barrettine Cladding Preserver
- Barrettine Cut End Preserver
- Barrettine Wood Preserver
- Barrettine Wood Reviver
- Barrettine Wood Protective Treatment
- Barrettine Decking Oil
- Barrettine Log Cabin Treatment
- Barrettine Mould and Mildew Cleaner
- Barrettine Super Concentrated Decking Cleaner
- Barrettine Danish Oil
- Barrettine White Knotting Solution

Can be used on structures where Barrettine Creosolve has been used previously and weathered for at least 3 months. Not compatible with Barrettine Shed & Fence Treatment, this must be removed first.

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STORAGE

Store between 5-30°C, out of direct sunlight and protect from frost. Once opened, close lid tightly between uses. If a skin forms on the surface, this can be removed and discarded but the drying time may be decreased from then onwards. If stored correctly, unopened tins will have a shelf life of two years from date of manufacture.

HEALTH & SAFETY

Wear appropriate personal protective equipment (PPE) such as chemical resistant gloves, overalls and eye/face protection to protect against splashes. If in doubt speak to your PPE supplier and show them the product label/Safety Data Sheet or call us for further advice.

Nitrile gloves would be expected to have a breakthrough time of >60 minutes for this product. Sufficient ventilation will provide respiratory protection but if in doubt about, a half-mask respirator fitted with a cartridge for organic solvents would filter the vapours. Where possible, the product should be used in the open air.

PREPARATION

Before use, test a small inconspicuous area with all products to be used, to ensure a satisfactory final finish and compatibility.

Reverse wood silvering using Barrettine Wood Reviver

Weathered timber can be treated with [Barrettine Wood Reviver](#), which will restore greyed/silvered wood to its natural colour and remove some visible surface mould.

Test compatibility with or remove previous coatings

ArmourFlex UV Protection Oil is suitable for use over Barrettine Universal Preserver, Barrettine Cladding Preserver and Barrettine Timber/Cladding Cut End Preserver.

It may be suitable for application over other minimal build wood stains or wood preservers, but this cannot be guaranteed and should be confirmed with a test patch.

It is not suitable for use over opaque paints or varnishes. These must be removed either by sanding, heat gun or paint stripping. If choosing to use paint stripper, either Barrettine Paint Panther or Peelaway may be suitable.

Remove decayed wood

Any decayed wood and the surrounding area should be cut out and replaced, then the entire structure treated with [Barrettine Universal Wood Preserver](#) before application of this product.

Allow wood to acclimatise in situ

Fresh wood should be acclimatised in situ before coating, up to 6 weeks externally. It is important that wood can settle to its environment, to avoid future warping or cracking. This is especially important outdoors, in particular for hardwoods such as teak, oak and iroko, due to their high tannin and resin contents. The weathering off period will open the grain and rinse away surface tannins, preventing them from interfering with the coating and reducing future tannin runs.

Failure to allow weathering off can lead to discolouration or patchiness, as surface tannins can leach unevenly when humidity is high. The higher the resin/tannin content, the longer the weathering off period required. Ask the wood provider for further advice.

Remove any resinous deposits

Remove resinous deposits with a scraper. Highly resinous woods such as cedar and hardwoods will be expected to have reduced absorption, so wipe with white spirit/methylated spirits to remove surface resins/oils. Knots will have a higher resin content so pay particular attention to these, to avoid an uneven appearance.

Fill any cracks or gaps as necessary, using a suitable wood filler

Test compatibility with ArmourFlex UV Protection Oil on a scrap of wood before use. Fillers which use sanding dust from the wood itself will achieve the closest colour match. Wax fillers are not compatible as they will not allow the product to absorb.

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Sand wood to a smooth finish

For the best finish, sand with a medium grit sandpaper. The product will also be more durable on a smoother surface. Fine wire wool can also be used to give a smooth finish but be sure to thoroughly brush away any residue afterwards. Steel residue can cause staining on hardwoods, particularly oak, as it reacts with the tannins.

Treat with Barrettine Mould and Mildew Cleaner

Before application, any dust or dirt should be removed by brushing. The wood should then be washed with [Barrettine Mould and Mildew](#) to kill any mould spores which may be present on the surface, preventing them from germinating in future. This should be permitted to dry for a minimum of 24 hours.

Treat with Barrettine Universal Preserver

For best results we recommended treating with 2 coats of Barrettine Universal Preserver before using ArmourFlex UV Protection Oil, sanding lightly between coats. This contains biocides to protect against wet rot, decay and wood boring insects.

If using new pressure treated wood, this step is not necessary, but any cut ends/drill holes should be treated with [Barrettine Cut End Preserver](#).

Some wood types such as Cedar and Oak have some natural resistance to fungal attack, but Barrettine Universal Preserver will still provide additional protection against wood boring insects.

APPLICATION

Application Conditions

Stir thoroughly with a flat-bladed paint stirrer before and during application, ensuring good ventilation (preferably apply outside). Protect areas not intended to be coated with impermeable sheeting/masking tape and if in doubt, confirm suitability before use.

The moisture content of the wood should not be above 20% and can be checked using a handheld moisture meter. The temperature during application and drying must be between 5-30°C, with no rain forecast within 12 hours. The relative humidity must be below 80% and ideally below 60%. If heavy rain has occurred recently, wait a minimum of 2 days for wood to thoroughly dry throughout. Application during cold or damp conditions will impact drying and may lead to a milky/hazy appearance as moisture becomes trapped in the finish.

Application Process

Apply 2-3 coats. Decant the product as needed and apply evenly using a high-quality brush and/or roller (Recommend Armourflex roller). The first coat can be applied generously until no further product will absorb into the wood. Subsequent coats should be applied sparingly. Beyond 2 coats, the gloss level will increase.

The first coat on bare/weathered wood will absorb far more product than subsequent coats.

Product can be re-coated after approximately 4 hours but will require a minimum of 10 hours to develop maximum water repellence. Protect from rain/frost until dry, to avoid damp becoming trapped within the finish.

CLEANING EQUIPMENT

Clean equipment with Barrettine White Spirit. Mop up any spills immediately with an absorbent cloth, then wipe with Barrettine White Spirit. Dried spills will require Barrettine Paint Panther or Peelaway 7 to remove, providing the surface below is compatible.

Product contains drying oils which could, under certain conditions, spontaneously combust. Saturate used cloths with soapy water immediately after use and lay flat outside to dry. Do not leave to dry in bundles, or on combustible surfaces.

COVERAGE

Approximately 15-20m²/L per coat. This range depends on wood porosity and is based on smooth planed wood. Denser woods such as oak and iroko will absorb less, so will be at the higher end of the range than less dense woods, such as cedar, larch and pine. The product is not targeted at rough sawn woods but if used on these, the coverage would be expected to fall below 15m²/L.

As a guide, a 1L tin will cover 8m² with 2 coats, whilst a 2.5L tin will cover 20m².

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AFTERCARE AND MAINTENANCE

Use Barrettine Mould and Mildew Cleaner to remove dirt and detritus from the surface when required. For best results, a preventative wash in early Spring and early Autumn will kill any mould spores present, reducing mould spore germination during these damp seasonal conditions.

Preventative maintenance is most effective, so an annual re-coat in early Spring or early Autumn would be best practice, following the maintenance wash with Barrettine Mould and Mildew Cleaner. However, maintenance coats can be applied as and when required, on the first sign of weathering. If breaches in the film begin to show, seen as cracks, flakes, blisters or wood greying, then a maintenance wash and re-coat should be carried out as soon as possible.

If larger breaches in the film begin to show, then the failed layer of coating should be removed by sanding. Barrettine Wood Reviver can then be used to reverse any wood greying, before re-treating.

Maintenance frequency will depend on the location of the wood, with external wood in a sunny, exposed, south facing location expected to require far more frequent re-treatment than sheltered, north facing structures. As a guide, exposed south facing surfaces will require an annual re-coat.

Use of harsh chemical cleaners, repeated use of alcohols or harsh physical methods such as jet washing or steam cleaning are not recommended and may damage the surface.

To remove the coating completely, Barrettine Paint Panther or Peelaway 7 would be suitable.

FAQS

1. How long will the product last?

a. There is no definite answer to this question, as it will depend on how much sun, rain and frost the wood is subjected to. Our testing is carried out in the UK under 'worst case scenarios', with an exposed South facing façade at 45°C to the sun. This maximises the amount of UV light our test pieces receive, and they also experience the full brunt of British rain and frost.

Under this scenario, our test pieces require re-coating approximately once per year. However, most exterior joinery is not at 45°C and usually has some degree of shade at certain times of day. For a more realistic average scenario, we would expect most situations to require re-coating every two years, and this is best carried out in early Autumn or after the last Spring frost.

2. The film has dried with a milky film, why? How can I remove this?

a. This indicates that there is moisture trapped within the film. The most likely cause is application to damp wood, or that the temperature has dropped overnight, causing condensation to form within the wood.

To remove the haze, the top layer will need to be lightly sanded back, wiped with White Spirit and then thinly re-coated under optimum conditions.

3. The ArmourFlex UV Protection Oil has been drying for over 10 hours and is still tacky, how do I fix this?

a. It may be that the conditions are not optimal for drying, so it is delayed. This can be expected when the humidity is high, or ambient temperature is low. In this case, it is worth waiting a further 24 hours to see if the surface will dry fully.

b. However, a tacky surface also occurs when the ArmourFlex UV Protection Oil has been applied too thickly. It dries by curing with air but once the top layer cures, it prevents the air from reaching the layers below. Consequently, applying too much in a single application will prevent full hardness from developing. In the worst case, the film will remain squishy.

To remedy this, severe excess should be removed with a scraper or wire wool soaked in white spirit. The surface should then be wiped down with white spirit and allowed to dry for 24 hours. Following this, the surface should be lightly sanded and a final thin coat reapplied as normal.

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c. Finally, application onto woods with a high tannin content can lead to delayed drying times, particularly if their surface has been freshly cut or sanded. In this situation, the surface should be rubbed down with fine wire wool dampened with white spirit, wiped dry with a cloth then allowed to dry for 48 hours. Following this, a fresh coat should be applied.

4. It rained before the ArmourFlex UV Protection Oil was fully dry and has left water marks. How do I remove them?

a. Initially, try wiping with white spirit. If this does not work, then lightly sand the surface and apply another thin coat.

5. There is a patchy finish after I've used the ArmourFlex UV Protection Oil. What has caused this?

a. This could be caused by a number of things, but the most likely reasons are a) uneven application b) uneven removal of previous coatings or c) uneven weathering of the wood below.

In case of a) the surface should be lightly sanded back, then a thin coat re-applied. However, in the case of b) and c) a more thorough sanding may be required, to remove all previous coatings and weathered wood. In the case of c), Barrettine Wood Reviver could also be used to restore the weathered wood to its original colour.

6. Why has my wooden structure weathered unevenly?

a. How quickly a surface weathers depends on a number of factors, with the direction it is facing playing a very important part. If south facing, the surface will be exposed to a higher intensity of UV rays from the sun, exhausting the UV absorbers faster and therefore degrading the resin sooner. Eventually if not re-coated, this would allow the UV rays to silver the wood below. As the resin provides the water repellence/beading, degradation will also reduce this.

b. If the surface is facing the prevailing wind in the area and not sheltered by other structures, it will also weather more quickly, although the effect is different to the weathering caused by UV. Direct contact from rainfall over a prolonged period will gradually leach the surface biocides present, until they no longer protect against surface mould or algae. This can lead to surface growths. The more exposed a surface is, the more rain it will be exposed to and the faster this will happen. It can also be seen at the bottom of structures, if water splashes on the ground and then hits the structure. If a surface is both north facing and receiving the prevailing wind, it will be very prone to mould as it will remain damp more frequently.

c. Other factors can also increase weathering, such as a salty environment by the coast or a winter with a frequent number of frosts, in between warmer spells. These would accelerate any differences seen by the direction the surface is facing. If a structure is weathering unevenly, different faces may require re-coating more frequently than others, or may require an extra coat.

7. Surface mould has appeared on the wood. How can I remove this?

a. Black mould is not actually harmful to the wood but can be unsightly. To remove it, gently scrub the surface with Barrettine Mould and Mildew Cleaner, in the direction of the wood grain, using a soft bristled brush. The likelihood of mould spores germinating on the surface can be reduced by pre-washing the wood with Mould and Mildew Cleaner before coating. Although the product contains a surface biocide, if the level of mould spores is too high, such as in repeatedly damp conditions, then this will be overwhelmed. It will also be subject to gradual weathering so the surface will benefit from regular maintenance coats.

8. Why is it necessary to apply the second coat of ArmourFlex UV Protection Oil thinly?

a. ArmourFlex UV Protection Oil dries by curing with air but once the top layer has cured, it prevents air from reaching the layers below. Consequently, applying too much in a single application will prevent full hardness from developing and will leave the layers below soft or tacky. If this occurs, see Q2.

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9. **I coated my garden table with ArmourFlex UV Protection Oil and it dried brilliantly, but has since become tacky. Why?**
- a. This can occur if harsh chemical cleaners such as those containing alcohol are used, or surfactants which have not been diluted sufficiently. The solution would be to lightly sand back and re-apply a fresh coat.
10. **How do I know if the moisture content of the wood is below 20%?**
- a. In general, wood which has been stored outside during a warm, dry spell of several days would be expected to be around 20% moisture. However, a handheld moisture metre can be used to confirm the moisture level, without damage to the wood. These are relatively inexpensive to purchase.
11. **Does this product 'feed' the wood?**
- a. This phrase suggests that wood used for furniture, joinery etc. is still alive, which it is not. What is usually meant by this term is that the product reaches deep into the wood fibres and coats them, rather than only forming a barrier on the surface. In this case, yes, ArmourFlex UV Protection Oil does feed the wood.
12. **I have used the product on new/freshly sanded oak and black marks have appeared, what are they and how can I remove them?**
- a. The tannins in oak can react and turn black, particularly when in contact with iron or water. On new/freshly sanded oak, there can be a high concentration of tannins at the surface, which then cause discolouration over time. However, these tannins are soluble so if the appropriate weathering off period is allowed, they will be removed from the surface before the ArmourFlex UV Protection Oil is applied.
- The tannin staining is exacerbated by iron, so if steel wool has been used make sure to remove all traces of this from the wood.
- If black staining does occur, it can be removed either by sanding or by using Barrettine Wood Reviver.
13. **Why is it important to use a good quality brush? What properties should I be looking for?**
- a. A good quality brush will not shed bristles into the coating and will hold the product well, without it dripping too quickly. For a solvent-based product like ArmourFlex UV Protection Oil, natural bristle fibres work well.

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TECHNICAL DATA

PROPERTY	VALUE
SG	0.800 KG/L
Viscosity	4 cPs
Odour	Hydrocarbon
Flash Point	>41 °C
Appearance	Free flowing low viscosity liquid, no particles, translucent. Colour varies across range, Clear product is pale amber in liquid form.

SAFETY



GHS07



GHS08

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP)	Warning
Contains	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate
Hazard statements (CLP)	H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P261 - Avoid breathing fume, mist, vapours, spray. P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of contents, container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Child-resistant fastening	Not applicable
Tactile warning	Applicable