

## Guardian LED Oil

### Description

Guardian LED Oil with hard wax is a coating intended for the protection of wooden surfaces. This coating is dried and cured using LED technology. Modern technology has made possible a product of superior performance that saves money and time. Guardian LED Oil is an oil that is safe for health and the environment.

#### Colors:

Guardian LED Oil colors are made according to the Guardian tone chart available on our website.

### Application Area

Guardian LED Oil is intended for wooden surfaces such as floors and furniture.

### Technical Data

State	Liquid
Odor	Almost odorless
Packaging	1KG

### Application Instructions

#### Working conditions:

The area where LED Oil is applied must be protected from direct sunlight. This applies to both manual and machine application. If sunlight comes into contact with LED oil, it starts to thicken and becomes unusable. In the case of machine application, if the application rollers get in contact with sunlight, the oil may thicken, which leads to damage to the rollers and major material damage. It is necessary to protect the space from the influence of sunlight.

#### Preparing the product for application:

Be sure to mix well before use. When opening and using, protect the product from sunlight. After use, immediately close the packaging so that light does not negatively affect the properties of the oil.

The viscosity of the oil is formulated so that it is most easily applied at a temperature of 20-35 °C. If the temperature is lower in the area where the LED oil is applied, the product Viscosity Corrector can be used. Viscosity Corrector is added to the LED oil at a maximum of 10% by weight. Always test on a smaller piece of wood to check color intensity. Be sure to read the TDS for Viscosity Corrector.

#### Preparation of the wooden surface:

Preparing the wood is a very important step. The surface on which the LED oil is applied must be sanded evenly. For oak floors, finishing with 100-120 grit sandpaper is recommended. In the case of an unevenly sanded surface, discoloration occurs. Over-polished parts receive less paint, and rough parts retain more paint, leading to discoloration.

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The same applies to veneered surfaces or other types of wood. The surface must be evenly sanded and well cleaned from dust before applying the LED oil.

Machine application (Roller Coater):



The parquet oiling machine consists of rollers for applying oil, a polishing table (pads and brushes) and an LED lamp.

For the first layer application on rollers, set consumption of 14-15 g/m<sup>2</sup>. Adjust the belt speed to 8-10 m/min. Guardian LED Oil - 100 Natur can be applied at 10 m/min, while it is recommended to apply darker shades at 8 m/min. Adjust the pressure and speed of the pads so that they rub the oil nicely into the pores of the wood. Also, adjust the brushes to correct the ped marks. After that, the parquet enters the LED lamp and dries in an instant.

After that, slightly matt the surface with scotch brite or with 500-grit sandpaper. Repeat the oil application procedure, but with the rollers set to 4-5 g/m<sup>2</sup>. In the second application, the same color of LED oil can be used or Guardian LED Oil - 100 Natur can be used. The decision is made solely from the desired appearance and does not affect the quality of the final product.

Uneven application can lead to discoloration. An insufficient amount of oil does not create sufficient protection of the parquet.

It is very important to maintain the machine and clean the components in order to achieve the desired results.

Wash the rollers with Guardian Equipment Cleaner, which is specially formulated to wash oiling machines without damaging the application rollers.

Be sure to take care of the saturation of the pads. After a certain time (depending on the quality of the felts), saturation occurs. Then the pads leave excess oil on the parquet, which leads to unwanted results that the brushes cannot correct. It is hard to notice on an individual parquet, but it is very noticeable when the parquet is put together. When the pads start to get saturated, they can be stopped a few times and cleaned with a cloth. When cleaning does not help, the pads must be replaced.

Brushes are also very important to achieve the desired results. Like pads, brushes need to be cleaned occasionally with a cloth. If the brushes become saturated, they will leave droplets on the parquet that lead to a very rough feeling to the touch after the oil has dried.

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The LED lamp at the end of the machine must have a wavelength of 395 nm and a power emission of 20 w/cm<sup>2</sup>. The lamp must be dusted and take care of proper air flow and cooling. LED lamps have a very long life with proper maintenance. Dirty glass on the LED lamp can have a negative impact on the drying of the LED oil. Periodically clean the glass of the LED lamp with Guardian Equipment Cleaner.

### Manual application:

There are several methods for manual application. If the elements are of a small surface, the oil can be applied with a hand felt. For larger surfaces such as doors, the oil can be applied with a mohair roller or spray gun. After that, rub the oil well into the surface using the felt placed on the sander.

It is important to rub the oil in well and remove all the excess from the surface (in the direction of the grain). Consumption in the first coat is about 15 g/m<sup>2</sup>.

Once the desired look is achieved, the oil drying process can begin. Dry the oil with a LED lamp with a light movement of 6-8 m/min, with a distance of 10-20 mm from the coating. It is mandatory to overlap when drying to ensure that the surface is completely dried. Never keep the LED lamp in one place because it can burn the surface. If the element is such that it requires a longer distance from the LED lamp, slow down the movement and repeat the drying process several times and check if the coating is dry.

After the first coat has dried, lightly sand the surface with 500-grit sandpaper and remove dust. Apply another 4-5 g/m<sup>2</sup>. The second layer is applied very easily because the surface is no longer absorbent. It is recommended to remove the excess from the surface using a fine G4 felt to achieve a smooth film.

Be sure to remove traces of coarse felt because they can create a rough feel to the touch after drying.

LED oil does not raise hairs. A rough surface occurs only if the oil is not well rubbed.

### Consumption:

LED oil consumption depends on the type of wood and processing.

For oak that has been sanded with 120 grit sandpaper, consumption is around 20 g/m<sup>2</sup> for two layers.

## Storage

The product can be used by the date on the packaging. Store it in a well-closed container, out of direct sunlight. Store the product at a temperature of 15-25 °C. Store the unused product in its original packaging. Keep out of reach of children. The product must not freeze.

## Additional Instructions

Do not dilute.

Drying must be at a temperature above 14 °C.

Do not work under the strong influence of sunlight.

All data as well as drying time are given for a temperature of 20 °C and air humidity of 60%. Lower temperature and increased humidity increase the drying time.

Always test the product on a smaller sample.

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### Note

The information contained in the data sheet is correct, to the best of our knowledge, as of the date of publication of this publication. The information provided is intended only as a guide for safe and proper handling, use, application, processing, storage and transportation and should not be considered as a warranty or quality specification. The information relates only to the specific material specified and may not apply to those materials used in combination with other materials or in a process, except as specified herein.

Due to the large number of application and processing possibilities, it is the user's responsibility to test whether the product is suitable for its purpose. If you are in doubt, you can contact our technical support.

If you are not sure whether this technical sheet is valid, you can visit our website for the latest information and technical data about our products.

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