

Maintenance instruction

The longevity and lasting beauty of urban furniture products lies in durable and high-quality materials, on the other hand, regular maintenance. Products that are exposed to extreme weather conditions and which are under heavy use tend to get dirty and fade over time. In order to keep the urban furniture high quality properties same as they were when they came straight from us for a longer period of time, the products need regular maintenance. Annual spring maintenance keeps the products beautiful and extends the lifetime of the product by several years. This maintenance manual describes how to perform maintenance on wood and metal surfaces in the Extery product range:

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1. Wooden surfaces

Wood is a living material that reacts to weather conditions and over time changes its appearance. If you want to keep the original color and appearance of the wood for many years we recommend performing light maintenance on the wooden surfaces regularly. The actual needed maintenance frequency depends highly on the location of the furniture but on average the maintenance should be performed once a year in spring. Skipping the maintenance makes the original tone of the wood fade away and turns gray over time. It is important to know that the fading of the wood tone is not considered as a quality defect.

1.1 Siberian larch

The excellent durability of Siberian larch comes from its special resin content which protects the tree from moisture and pests. Despite of the amazing properties of Siberian larch it is necessary to carry out maintenance on the wood surface at least once a year.

Regularly maintained wood surfaces retain their amazing properties for years and are more resistant to external influences than an unmaintained surface.

Maintenance steps:

1. Cleaning the surface from dirt

For the outcome to be even and beautiful the surface of the wood needs to be cleaned before applying the oil. A mild detergent is suitable for cleaning. Clean the wood surface and rinse it with running water.

Needed items:

- Detergent (soap water or mild detergent)
- Running water
- Cleaning cloth, sponge or brush

- After cleaning allow the bench to dry for few hours to 1 day (depending on the weather) then continue with oiling.

2. Oiling the surface

Mix the oil thoroughly in the jar so that all the compounds are well mixed before applying. Apply the oil to the wood surface with a clean sponge or a fleece cloth. Avoid applying too much oil. Remove the excess oil with a dry cloth to obtain an even result. Immediately remove the oil stains from the metal surface with a cloth. Dried oil does no longer come off the metal.

Needed items:

- Osmo oil 706
- A sponge or a fleece oil cloth to apply the oil.

Park bench where the maintenance has not been performed for more than 2 years:

To restore the freshness of the larch when the bench has not been maintained for several years the wood surface must lightly be treated with sandpaper with hardness of P120. Clean the bench before sanding. After sanding continue with oiling the wood surface as described in point 2.



1.2 Thermo-treated ash

The goodness of the thermo-treated ash lies in its durability, beauty, dimensional stability, environmental friendliness and quality. Thermo-treatment is a computer-controlled process of heating wood. Procedure changes the cellular structure of the wood - moisture, bacteria and acids are removed from the wood. Such nutrient-poor wood is not suitable for growing fungi, rot and mold. The whole process does not include any chemicals and is very friendly for the environment. During the heat treatment, the structure of the wood changes throughout the thickness of the material, and the wood also has a characteristic brown color on the inside. The tone of the thermo-treated ash is deep brown.

In order to maintain the fresh appearance of the heat-treated island, we recommend that the wood be cleaned and oiled once a year in the spring.



Maintenance steps:

1. Cleaning the surface from dirt

For the outcome to be even and beautiful the surface of the wood needs to be cleaned before applying the oil. A mild detergent is suitable for cleaning. Clean the wood surface and rinse with running water.

Needed items:

- Detergent (soap water or mild detergent)
- Running water
- Cleaning cloth, sponge or brush

- After cleaning allow the bench to dry for a few hours to 1 day (depending on the weather) then continue with oiling.

2. Oiling the surface

Before applying the oil must be thoroughly mixed in the jar so that all the compounds are well mixed. Apply the oil to the wood surface with a clean sponge or a fleece cloth. Avoid applying too much oil. Remove the excess oil with a dry cloth to obtain an even result. Immediately remove the oil stains from the metal surface with a cloth. Dried oil does no longer come off the metal.

Needed items:

- Osmo oil 010
- A sponge or a fleece oil cloth to apply the oil

- Let the bench dry at least for 4 hours before use.

Park bench where the maintenance has not been performed for more than 2 years:

To restore the freshness of the ash when the bench has not been maintained for several years the wood surface must lightly be treated with sandpaper with hardness of P120 after cleaning the bench

After sanding continue with oiling the wood surface as described in point 2.

1.3 Tropical wood



Tropical wood is often the preferred outdoor wood material for its quality, durability and stability. In addition to its strength and quality, tropical wood has a very unique appearance. Untreated tropical wood is freshly light brown with a delicate pink undertone. Over time, the shade of tropical wood changes to silver gray. Tropical wood is very dense in structure. Due to its high density, tropical wood does not absorb oil but remains on the surface of the wood, which means that the oil applied to the surface wears off unevenly and evenly. For this reason, we do not oil tropical wood, but offer it naturally.

The tropical wood in our selection is always FSC marked.

Tropical wood is relatively maintenance-free wood. In order to preserve the aesthetic properties of wood, it is sufficient to clean the surface of the wood of dirt at least once a year in the spring.

Cleaning the surface from dirt

At least once a year, preferably in the spring, wash the surface of the wood with clean running water and a sponge and, if necessary, use soapy water or a mild detergent.

Needed items:

- Detergent (soap water or mild detergent)
- Running water
- Cleaning cloth, sponge or brush

1.4 Painted pine

Regardless of the type or color of the paint, the painted wooden surface also needs maintenance. The condition and maintenance of colored pine must be carried out at least once a year.

Maintenance steps:

1. Visual inspection and assessment

Check the condition of the product surface. If there is no dirt, cracks or other damage on the surface, the following points are not necessary.

2. Cleaning the surface from dirt

At least once a year, preferably in spring, wash the painted surface with clean running water and a sponge and, if necessary, use soapy water or a mild detergent.

To remove **paint** and **graffiti** use a strong cleaner. If this method is not sufficient or damages the painted surface we recommend to continue as described in step no. 3.

3. Repairing the injuries

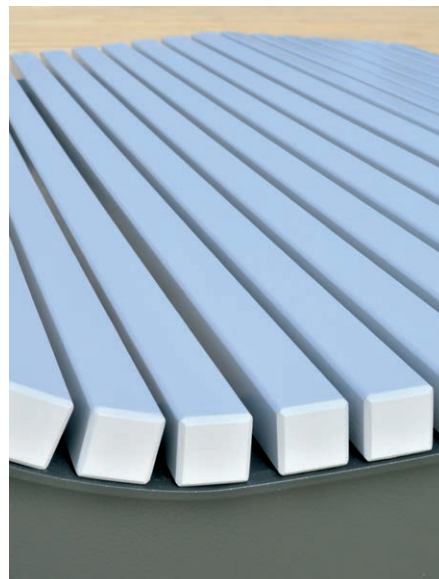
Paint damage that was identified during the assessment must be removed in order to avoid rot in the wood. Proceed as follows:

- Scrape the damaged area evenly with scraper or sandpaper. Recommended hardness P180-220.
- Clean the treated area from dust with water and sponge, use soapy water if necessary. Rinse and allow the surface to dry thoroughly.
- Before painting treat the revealed wood surface with a wood preservative impregnating agent. Let it dry. Moisture trapped in the wood can cause wood rotting.
- Cover the damaged and treated area with a suitable shade of outdoor paint. If necessary apply 2 layers of paint. Let the first layer of paint dry thoroughly before applying the second layer of paint.

*** Apply the paint with a brush or pistol.**

Important to know before you start painting:

- Mix the paint thoroughly with a wipe before applying the paint.
- The surrounding air temperature has to be at least +5 degrees and the humidity below 80%.
- Direct sunlight should be avoided during painting because the drying process is rapid in a direct sunlight. As a result, the durability of the paint layer suffers.



2. Metal surfaces

Maintenance frequency: at least once a year.

When performing maintenance on metal surfaces, initially perform a visual assessment and check in advance:

- Are there loose or loose parts. Tighten the fasteners if necessary.
- Is there any major damage to the product. If necessary, ask the manufacturer for replacement parts.
- Make sure that the air temperature is between +5 and +35 degrees during maintenance.

2.1 Stainless steel surfaces

Stainless steel is extremely strong and has excellent properties. Despite the very good properties, it is also necessary to maintain the surface of stainless steel regularly, at least once a year.

Maintenance steps:

1. Visual inspection and assessment

Evaluate the condition of the product surface and check the fastenings. Tighten if necessary.

2. Cleaning the surface of stainless steel from dirt

- Use soapy water or a mild detergent to remove **dust** and **dirt**. Rinse with clean running water.
- for **heavier stains** use existing household cleaners. Rinse the surface with clean running water.
- remove **grease** and **oil stains** with alcohol-based cleaners. Rinse the surface with clean running water.
- If the surface of the product is vandalized with paint or graffiti use special graffiti removal tools.

Avoid: Abrasive industrial chemicals and / or hydrochloric acid chemicals (HCl).



2.2 Hot-dip galvanized surfaces

Hot-dip galvanized steel is very durable and suitable for outdoor conditions. Hot-dip galvanizing is a process in which steel products coated with a layer of zinc. The undamaged galvanized surface provides the product with rust protection for many years. Zinc reacts with oxygen in the air to form zinc oxide, which reacts with water molecules in the air to form zinc hydroxide. Reaction of zinc hydroxide with carbon dioxide produces an impermeable, very stable and insoluble dull gray layer of zinc carbonate, which covers the underlying zinc layer very tightly, preventing it from corroding. In order for hot-dip galvanized surfaces to remain durable and beautiful for a long time, regular surface maintenance is required at least once a year.

Maintenance steps:

1. Visual inspection and assessment

Evaluate the condition of the product surface and check the fastenings. Tighten if necessary.

2. Cleaning the hot-dip surfaces from dirt

- for **dust** and **dirt** use soapy water or a mild detergent. Rinse with clean running water.
- **remove grease and oil stains with an alcohol-based cleaner. Be sure to rinse with clean water.**
- Kui toote pinnal on **värvi või graffitiga** vandaalitsetud kasuta spetsiaalseid graffiti eemalduseks mõeldud vahendeid.

When cleaning, be sure to avoid: scrapers or scratching materials, as they can damage the galvanized surface and reduce the rust protection.

Important to know: The grayish white oxide layer on the surface known as white rust, is not dirt or a defect that should necessarily be removed. White rust does not damage or weaken the surface of the product. If desired the layer can be removed by pressure washing.



3. Hot - dip galvanized steel coatings

Hot-dip galvanized steel that is coated with powder paint has the highest resistance to moisture and corrosion. Graffiti varnish makes the surfaces of the product easy to clean and keeps the original appearance of the product longer. Although the coatings are used to protect the steel surface it is also necessary to clean and maintain the coated surfaces.

3.1 Powder coated surfaces on hot-dip galvanized steel

In urban outdoors powder coating gives hot-dip galvanized steel a long-lasting corrosion protection and keeps the aesthetic properties of the product longer. To keep the product properties beautiful for as long as possible, regular surface maintenance is required at least once a year.

Maintenance steps:

1. Visual inspection and assessment

Evaluate the condition of the product surface and check the fastenings. Tighten if necessary.

2. Cleaning of powder coated surface from dirt

- for **dust** and **dirt** use soapy water or a mild detergent. Rinse with clean running water.

- for **heavier stains** existing household cleaning agents can be used. Rinse washed surfaces with clean running water.

- In the case of **paint stains** or **graffiti**, it is necessary to use special graffiti removal liquid (for example: 3M GR1500) and low pressure pressure washing. Be careful not to damage the original paint surface while using the graffiti removal. If this method does not work or the painted surface has been damaged, proceed as described in section 3.

3. Damages and scratches on the product surface

- Scrape the affected area evenly with a scraper or sandpaper. The recommended hardness for sandpaper is P180-220.

- Clean the sanded area with water and a sponge. Use soapy water if necessary. Rinse and allow the surface to dry thoroughly.

- Make sure that the surface being painted is dry. Apply a sufficient amount of outdoor paint on the treated surface. If necessary apply two layers of paint. Allow the first coat of paint to dry thoroughly before applying the second coat of paint.

* **Apply the paint with a brush or pistol.**



3.2 Antti-graffiti laquer

An additional protective layer can be added to the surface of the product to maintain the good appearance of powder coated products and to reduce maintenance costs.

As a side effect, the varnish adds shine, so the surface of the finished product is not matte, regardless of the type of powder paint chosen. The anti-graffiti varnishing process is similar to powder coating. The varnish is based on polyurethane and a barrier substance is released during its processing. This solution is designed to allow easy and quick removal of most forms of graffiti and is recommended for use where there are increased requirements for graffiti resistance. Typical applications include train, tram and bus products, bus shelters,

Instructions for removing different types of dirt from anti-graffiti varnish:

Dirt	Cleaning fluid
Enamel spray	90% denatured alcohol, acetone, trichloroethylene.
Water-based marker	Rub with a clean cloth.
Permanent marker	90% denatured alcohol, 1:1 mixture of denatured alcohol and detergent, acetone, trichloroethylene, tetrachloroethane.
Lipstick	Rub with a clean cloth.
Shoe polish	Rub with a clean cloth.

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