

Description of materials

Nola's products are manufactured in wide variety of materials. Material selection is made with a focus on the product's aesthetic and practical durability.

We try to use recycled materials and materials easily recycled in existing facilities whenever possible.

General information on the environment

Nola's objective is to make products which are environmentally sound. We consider three aspects to be of particular importance, namely;

1) That the materials are chosen with care.

Manufacturing is almost exclusively in Sweden, which provides short shipping distances and allows for an expanded and continuous control of quality and environmental aspects.

2) As far as possible, we use environmentally certified suppliers and materials, and we use recycled materials.

3) We believe that the lifespan and durability of our products, both aesthetically and practically, are crucial to the product's overall environmental impact.

General information on surface treatment

The surface treatment of the products has primarily two functions. The first function is to prevent various degradation processes such as corrosion on metal, and mould attacks on wood. The other function is to produce an aesthetically pleasing product.

General care and maintenance

Nola's products are an investment in the environment that pays for itself both financially and with well-being. In order to get the utmost benefit, care and maintenance as well as planning and attention to detail are required. Together with our customers, we are creating an environment in both a narrow and a broad sense. Neither care nor maintenance are demanding but need to be done continuously. Paper receptacles and ashtrays need to be emptied. Benches should be dried so that mould and rot cannot become attached. Wood cracks and damage to wood should immediately be repaired after cleaning. Damage to steel should be done immediately after corrosion is removed, so that the rust does not spread. It is advantageous if wood products can be stored indoors in a cool area during late autumn, winter and early spring.

WOOD

General information on wood

Wood is a living material. It is affected by changes in weather. It will change under the influence of rain and sun. Small cracks in the material will progressively become developed. We primarily use pine in our products – an environmentally friendly, domestic wood. Pine in our furniture is environmentally certified according to FSC as far as possible, which means that felling and growth are managed according to set criteria, a so-called Well Managed Forest.

General information about mould attacks on wood

There are many different types of moulds. A common type is black mould which, because of its colour, is clearly visible on bright surfaces. These fungi grow on the surface layer and do not actually destroy the substrate in any other way than by appearance. What appears are the dark spores, while the fungal threads (mycelia), which make up the actual fungus, have no colour.

Moulds may, for example, occur on wooden furniture if it is unprotected and exposed during prolonged precipitation. If rain has fallen on the wood and it is damp outside, mould fungi will soon start to grow.

When storing outdoor furniture, it is important not to cover it with a tarpaulin that reaches down to the ground, to permit proper evaporation of moisture. Soil moisture contributes to the growth of fungi. Wooden furniture should be covered but well ventilated. It should always be placed on the ground so that an air exchange can occur under the tarpaulin.

The problem of mould attacks is likely to increase with a shift to wetter summers, with continuous longer periods of humid and warmer autumns and winters. For this reason, we recommend regular inspections and washing of oiled pine furniture (i.e. yearly or every two years).

How can you remove *black mould attacks*?

Option 1:

Firstly, you should use common detergent with a brush and garden hose that not only removes mould but also dirt. High pressure washing should be avoided as it can push moisture into the wood through cracks and nails. Soap should be avoided as it is very difficult to rinse off.

Option 2:

Use a cleaning agent such as Grovrent or Trallrent, which are usually used for the cleaning of balconies and

terraces. These agents also clean grease, dirt and soot from the wood surface.

Option 3:

If none of these conventional detergents work, use Alg & Mögelfritt (a brand of cleaning agent for removal of algae and mould).

An effective remedy for all types of surfaces on the outside of a house affected by mould or algae. Also used on decking, facades, fences, suspended ceilings etc.

To be considered:

You should not wait until mould is visible. When mould has already seeped into the paint layer, you will need to use stronger agents like Alg & Mögelfritt. The keyword is MOISTURE. The north and east facing sides of houses have longer periods of wetness, and therefore wood furniture is more likely to suffer from biological attack, especially if you have plants close to the furniture.

Pine

Damaged or untreated pine is quite easily attacked by decomposition processes; therefore, it is especially important to repair damaged surfaces.

Pressure-impregnated pine:

Products manufactured with pressure-impregnated pine usually require no maintenance. By using wood oil products, you can enhance the appearance of the wood while extending the life of the product. e.g.: Pine planks. For aesthetic reasons, painted pressure-impregnated pine should be allowed to dry properly first.

Stained pine:

Products manufactured with stained pine should be oiled at least once a year. If the product is outdoors year-round, the maintenance intervals should be shortened to at least twice a year. e.g.: Yellow stained pine Haga sofa

Lacquered pine (oil-based):

Products with lacquered pine must be maintained regularly with alkyd paint, with a maintenance interval of approximately once a year. Damage and cracking should be repaired immediately. Spray paint is available to order in spray-packs of standard colours from Nola. e.g.: Painted Kalmar pine sofa.

Lacquered pine (water based):

We also offer water-based surface coatings. A waterborne colour is gentler on the environment. With

normal wear and tear, the paint has good long-term durability. We have recently begun an evaluation of this colour system and will eventually switch to water-based colours for wood. e.g.: Hjorthagen painted pine.

White pigmented pine:

Pine products treated with white pigmented oil should be oiled twice a year. If the white pigment is bleached, you can mix the wood oil with a very small amount of white alkyd oil paint. e.g.: Krokodil bench.

Oiled oak

Nola uses mainly American red oak in its furniture. The quality is very high, usually completely without any visible knots. Because of the tannic acid high content, it is a very durable wood in an outdoor environment. Unmaintained oak will develop black spots after a period of time. These appear quite soon after the product has been set up outside and may initially appear as almost entirely black. In environments with high levels of metal contaminants in the air, the process is accelerated, and the oak can already have extensive stains after a month. The spots fade gradually, and after several seasons it will turn grey, similar to teak. Smaller cracks usually also occur, as oak is a very "lively" wood. These cracks have a marginal effect on the strength and tone of the material. Products manufactured with oiled oak should be oiled twice a year for the best possible protection. Good maintenance can never completely prevent stains from occurring. Oak that is not maintained becomes blacker and greys faster, but it still has a very long-life span. For the re-oiling of products, a fine oil that penetrates wood should be chosen instead of a film forming oil. e.g.: Budget sofa.

Oiled teak

Teak is exceptionally durable in an outdoor environment. Teak has a high content of silicon and tannins, which makes it relatively expensive to process. Teak comes in a reddish-brown colour and to preserve this it is important to oil the woodwork several times during a season, otherwise it will quickly deteriorate. This has no impact on its durability. Products made with oiled teak should be oiled at least twice a year. e.g.: Kalmar teak sofa.

Untreated teak

Products manufactured in teak can be left untreated as an alternative to oiling. In this case, they will quickly begin to grey outdoors. This has no impact on their durability.

Mahogany

This wood has good durability in an outdoor environment. In addition, it maintains its colour tone better than oak and teak. Mahogany lives and moves similarly, if not more so than teak. Oiled mahogany should be oiled a few times a year.

Ipé

Ipé has up to 40 years durability if it is treated with no more than normal care. With regular oiling once a season with wood oil, Ipé can last for up to 100 years. Untreated, Ipé will eventually transform from a maroon to a more silver-grey colour. To preserve this brown colour, the decking must be treated and maintained with wood oil.

Jatoba

Generally left untreated, it is a very hard and strong hardwood with high durability. Jatoba wood is a brown colour with black accent stripes, that over time becomes a deep and rich red colour.

Larch

Larch has good durability in an outdoor environment, better than for example pine. Larch contains a fair amount of resin and wax, which can cause larch to turn grey if left untreated. We use larch in our Lärka planking.

Painted MDF-H board

MDF (Medium Density Fibreboard) is a fibreboard, manufactured from wood and pulp. Products manufactured in covered MDF-H board, should be regularly maintained with alkyd paint. Maintenance intervals are approximately once a year. Any damage should be repaired immediately. Spray paint is available to order in spray-packs of standard colours. e.g.: Bumerang, covered MDF-H board.

Plywood

Plywood is a lamination of thin layers of wood veneer. Plywood has very little moisture exchange with the environment. The material is available in panels, but also as moulded details, mainly in our indoor products. Damaged paint surfaces can be repaired with alkyd paint after cleaning.

Compact laminate

Compact laminate is a sheet material of kraft paper as well as phenolic resins, compressed under heat and extreme pressure. The material is completely water resistant. Compact laminate is heavy and very strong, and usually requires no maintenance.

LINAX linseed oil treatment

We can offer Linax-treated pine as an alternative to other surface treatments. Linax is a linseed-based impregnation that provides extra-long lifespan in outdoor environments and corresponds to impregnation class AB. It is available in untinted or one of four different base colours.

Sioo

Sioo is a wood protection product with environmentally friendly silicon technology. Water-based and biocide free. We use Sioo mainly for our oak furniture, but it works on all kinds of wood; it fits all woods, in outdoor and indoor applications and provides a light wood surface without pigment. The surface is UV-proof, water repellent and not tacky. Provides an active and preventive effect against algae, mould and pests. Also provides anti-corrosion, wood reinforcement and fire-retardant characteristics. This wood protection provides high durability and easy maintenance. No annual oiling is required. Can be recoated. Nola's Sioo-treated products are treated twice at delivery, once with a wood shield (Premium Wood Shield Altan) and once with a surface protection (Premium Surface Protection Altan). 10-14 months after the product has been placed outside, it should be treated once more to achieve the best durability with Sioo: x Premium Surface Protection Altan. The life expectancy after re-treatment is estimated to be approximately 10 years, before it needs to be treated again with Premium Surface Protection Altan. The surface protection forms a wear surface, which means that products that are exposed to hard mechanical wear may need to be treated more frequently.

The surface treatment has performance as per standards

EN 46 and EN 113.

For information about the Sioo treatment, see www.sioo.se.

METAL

General information on steel

Steel is an alloy in which iron constitutes the largest part. Steel comes in a variety of grades from plain carbon steel to acid-proof stainless steel. Different steels differ in strength. Nola uses high quality steels of good strength in their products. Plain steel rusts if left untreated, therefore it must be surface treated. Nola uses two main methods of surface treatment for steel components. Most common is zinc and yellow chromate as well as polyester powder coating. The second method is hot-dip galvanizing sometimes with post treatment blasting as well as polyester powder coating. Both methods are very durable. Other common methods are epoxy based as well as polyurethane based finish. These are also good surface treatments.

Maintenance:

- Products that are galvanized, yellow-chromated and polyester powder coated can be repaired with alkyd paint. e.g.: Kalmar teak sofa.
- Water-lacquered, epoxy-based and polyurethane lacquered surfaces can be repaired using alkyd paint. e.g.: Ludvika wood protection.
- Hot-galvanization can be repaired using "Zinc Pro Corrosion Protection". e.g.: Ludvika wood protection.
- Hot-dip galvanization as well as polyester powder coating can be painted with alkyd paint. e.g.: Street bicycle stand.
- Products manufactured with stainless steel should be treated regularly with Dinitrol anti-corrosive oil or equivalent. e.g.: Milan countertops.

Stainless steel

Products made of stainless steel may need to be cleaned with Chrome Gloss or steel wool pads.

General information on stainless steel

Stainless steel is the well-known but incorrect term for steel with high chrome alloy. Most so-called stainless steels can still surface rust, but to a much smaller extent than ordinary steel. Only so-called acid-proof steel is in fact stainless steel. Naturally these are very expensive. The majority of screws and bolts used in Nola's products are A2 stainless steel.

Corten steel

Corten steel is resistant to high temperatures and rusts slower than ordinary steel. Corten steel, like cast iron, rusts without degrading in strength. Our Egypt planter is made of Corten steel.

Cast iron

Cast iron has a high carbon content, so the untreated material quickly receives a protective iron oxide, which protects the product from further corrosion. Cast iron has a high content of recycled material. Cast iron products that are painted at delivery do not require maintenance. e.g.: Markgaller.

Rust protection paint and finishing paint with the same foundation and finishing undercoats painted with alkyd paint. e.g.: Gjutjärnsurnan. Products painted with rust protection paint as well as those pre-painted are repainted with alkyd paint. e.g.: Tessin sofa.

Products painted with a 2-component colour can be repaired with the corresponding colour or 1-component alkyd paint.

Aluminium

Anodised or extruded aluminium

Anodising aluminium is an electrolytic method where alumina is applied to the surface of the metal. Alumina is the same as corundum, which is one of the most durable, hard materials available.

Maintenance of products made of anodised cast or extruded aluminium; Worn surfaces require renewal of anodising. e.g.: cigarette butt grid for Slingan ashtray / cornices for Seagull bicycle roof.

Cast aluminium

Cast, untreated aluminium develops so-called white rust with time. The product is not damaged by this, with the surface becoming mealy in appearance. Sand cast aluminium, like cast iron, has a very high content of recycled material. Products with cast aluminium may be brushed with a steel brush to remove corrosion. e.g.: planting urn Folke. Powder-coated aluminium is repaired with alkyd paint. e.g.: planting urn Berzelii.

Aluminium plate

Aluminium plate, like steel plate, is an alloyed material. Aluminium plate can vary greatly with respect to strength and corrosion, depending on the composition of the alloy. Products made of aluminium plate may be polished with a steel wood pad. e.g.: lid for Basket.

Aluzink plate

This is a steel plate covered with a layer of aluminium and zinc. This plate is highly resistant to corrosion. If scratched, rust can occur in the scratch, but the aluminium-zinc layer will soon cover the area and

prevent further degradation. The Angle bicycle rack is made of aluzink plate.

Painted aluminium can be repainted with alkyd paint. e.g.: underside of the Folke planter.

Cast bronze

Bronze is an alloy of copper and tin. The material is extremely resistant to weather and wind, often used in church bells. Should a product crack or break through vandalism it can be repaired by soldering or welding. A damaged oxide layer can be recovered through patination by a skilled craftsman. Product example: Näckros planter.

POLYMERS / PLASTICS

Fibreglass

Products made of fibreglass reinforced polyester usually do not require any maintenance. When scratched, the material can be polished with rubbing compound. In case of damage, the fibreglass reinforced plastic can be repaired using plastic filler and glass fibre. e.g.: inner container for the planters.

Polyethylene

Polyethylene is a thermoplastic with a waxy surface. Polyethylene can handle sunlight well. Clean the surface with mild soap solution. Polyethylene can be recycled or burned. Polyethylene (HDPE) is used in Peg seating.

Polycarbonate

Polycarbonate is a highly impact resistant thermoplastic. Scratches can be very carefully smoothed out with a hot air gun. Polycarbonate can be cleaned with a mild soap solution. Strong detergents can scratch or craze the material. Polycarbonate (PC) is used in the roof of the Seagull bike house.

Polyurethane

Synthetic polyurethane rubber is soft and elastic, has good tear and tensile strength and allows for a softer grip. The material is cleaned with a mild soap solution, alkaline solvents can discolour the material. For example, polyurethane (PUR) is used in the Goal sofa.

CONCRETE

Concrete and Fibre-reinforced Concrete

Concrete is cement mixed with ballast, often crushed stone. The material has a very high compression strength but is fragile in tension. To compensate for this, concrete can be reinforced, often with steel.

Fibre-reinforced concrete

Fibre-reinforced concrete is concrete mixed with fibreglass. The material has significantly increased strength and flexibility. Both normal concrete and fibre reinforced concrete are sensitive to hard edge impacts, ordinary concrete far more so. A concrete product that has been damaged can be repaired with a polyester patch or plastic filler.

Terrazzo concrete

Terrazzo is an internationally used term for high-grade concrete used as a surface material. Terrazzo is a natural material consisting of ballast (i.e. rock material, usually marble) mixed with cement. Terrazzo has high wear resistance. Products made with polished terrazzo concrete can be washed with soapy water to remove lime deposits. e.g.: Hot Stone.

Stained concrete

Products made of stained concrete may be cleaned using low pressure washing. Damaged products can be repaired using a repair kit available for order. e.g.: the Kalmar urn.