

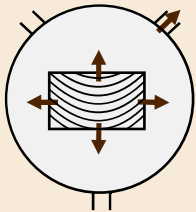
PALMAKO PRESSURE TREATMENT

TREATMENT AS ADDITIONAL PROTECTION FOR WOODEN PRODUCTS

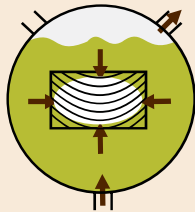
Timber is vulnerable to attack from insects, damp and fungi and needs protection to extend its service life. Unprocessed wood becomes greyish after having been left untouched for a while and can turn blue and become mouldy. In order to extend the service life of timber we pressure-treat our products with wood preservatives.

PROCESS

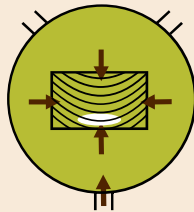
The preservative penetrates deep into the wood with the help of vacuum and pressure. In this case a vacuum is initially generated in the cell cavities thereby evacuating the air inside them. The cavities are then filled with preservative solution which is forced into the wood under high pressure. Different vacuum-pressure processes are used depending on the type of wood, environment and end purpose. The majority of Palmako timber is treated according to European Standard EN351-1.



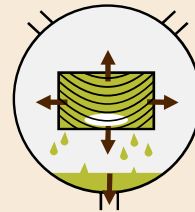
Wood is put into the tank & pre-vacuum begins. Air & moisture is pulled out from wood cells.



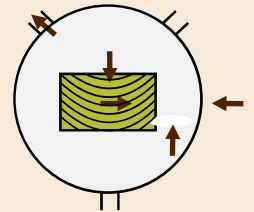
The tank is filled up with impregnation liquid.



With hydraulic pressure, liquid is pressed into wood.



The tank is emptied.



Final vacuum pulls out unnecessary impregnation liquid.

TREATMENT CHEMICALS **impralit®**

Green or brown impregnated products have been treated with impralit®-KDS wood preservative from Rütgers Organics GmbH. This water-borne, chromium-free preservative protects against insects, rot and fungal decay, and also provides temporary protection against blue stain and mould.

Impralit TSK 40 by Rütgers Organics GmbH is a grey coloured wood preservative system based on the active compound propiconazole. Wood treated with it is free of heavy metals. It protects the wood from decay and preserves the wood for many years. The grey colour protects the wood for 1,5 to 2 years from its natural discolouring (turning grey through ageing). An advantage of the grey colour is that once the wood starts to discolour through ageing it is hardly seen because the wood stays grey.



GNVPI Green impralit®-KDS



BNVPI Brown impralit®-KDS



GYVPI Grey Embalit P/Embacolor CG

PRODUCTS IN TREATMENT

Pressure-treated machine-rounded posts are widely used and highly appreciated by the end users. In addition to the posts Palmako offers pressure-treatment for several timber in the garden products – fence panels, wooden garden furniture, wooden swing sets and sandboxes as well as some garden houses.



Bringing joy to the garden

Palmako
LEMEKS GROUP

TREATMENT VISUAL APPEARANCE

After the treatment, timber visual appearance is influenced by many factors such as UV radiation, timber texture, packing materials etc.

Treated timber has often **lighter marks** on surface caused by **UV radiation** on timber before treatment. Even the slightest exposure to daylight can cause visual colour difference on timber surfaces. Parts of the timber not exposed to daylight remain lighter after treatment compared to exposed areas. The colour difference is most commonly seen **under packing tapes** and on the products which are on the **outer layers** of treated product's packs. In case of green-treated products the UV light causes minor colour difference, but on brown-treated products it can be more visible. These colour variations will even out over time once the products are in use.

NB! Despite the colour differences the protection still remains the same!



Colour variations caused by UV light and packing tapes.



One package has been exposed to sunlight more than others.



It has been difficult for brown colour to penetrate in packed posts.

Brown-treated products may also show lighter areas due to the properties of the treatment solution. In brown treatment solution the brown colour is added to basic impralit®-KDS treatment solution in order to cover the timber surface with brown colour during the treatment cycle. The particles of the brown colour are larger than the copper salt particles in basic treatment solution, which makes it harder for the brown colour to penetrate evenly throughout the entire product pack. The most common visual colour differences appear under packing tape, on packing slat connection points and on places where timber surface is very tightly pressed together in treated pack. These colour variations will even out over time once the treated product is in use.

NB! Despite the colour differences the protection still remains the same!



Colour variations of grey treatment



Visible treatment solution drying marks



In **grey treatment** solution the basic treatment chemical which gives the protection to treated timber is metal-free and colourless. Therefore, the grey colour does not have to hide strong basic colour like brown colour has to cover the initial green colour. The grey colour **gives much lighter tone** to timber surface and the timber texture remains visible underneath the colour coverage. Because of the properties of the timber texture the grey-treated products can have more variable covering tone than green or brown treated products. Grey-treated products can also have **more visible treatment solution drying marks** compared to green or brown colour, which will fade over time during use.

NB! Despite the colour differences the protection still remains the same!



All treated products are **susceptible to the sunlight influences**. The colour of green or brown treated products will start to change soon after the product is exposed to sunlight. Due to that the surface of treated timber will turn into bronze tone and after some years to grey tone. The rate of bleaching is dependent on the weather conditions and the intensity of sunlight. The surface of wood pressure-treated with copper products (like impralit®-KDS) may have tracks of **treatment salts**. This is because the water evaporates from the wood and brings the salts out. Water also evaporates from wood surface but the salts will remain on the surface. This process is normal and does not reduce the effectiveness of treatment solution.



Treatment salts on timber surface.



Resin



Wood filler