GENERAL INFORMATION

Types of wood surface protection

In order to protect wood, we apply vacuum-pressure treatment in an autoclave during which the wood preservative is pressed into its structure. The agents used in vacuum-pressure treatment are additionally enriched with colouring pastes which emphasize the aesthetics of our products; their durability depends on the prevailing weather conditions.

Some of our products have a surface-decorative coating applied on a technological line, on which a layer or layers of wood protective coating are formed. For this purpose we use paints and oils applied on dry wood surface.

Oil and paint effectively protect the wood surface from sunlight, while colour durability depends on weather conditions. The first coat of the protective layer must be applied to the surface of the wood treated with paint or oil within 12 months from the date of purchase at the latest.

Recommendations for the care of garden architecture products

Articles of garden architecture require regular care (the aesthetics should be checked every season) due to the fact that the wood greys out naturally and is susceptible to weather and biological conditions. Regular inspections and maintenance are required to maintain the aesthetic appearance of the surface.

Vacuum-treated wood may be painted with commonly available solvent and water-soluble glazes and with clear oil for wood previously treated for outdoor use. Due to the natural colour of the treated wood, it is absolutely recommended to apply a trial layer on less visible parts, especially when using water-based coatings or glazes for this purpose.

Wood previously painted with wood paints may be painted with clear wood oils for outdoor use to deepen or preserve the colour. It is also possible to use different wood paints for outdoor use. Nevertheless, you should always test your paint on less visible parts.

Wood previously painted with wood oils can be painted with outdoor wood oils to deepen or preserve the colour. Nevertheless, you should always test your paint on less visible parts.

In addition, wood burrs forming during use should be sanded off with abrasive paper. Subsequently, the sanded surface should be treated with a general purpose wood preservative.

For children's homes that are not coated with any agents we recommend using paints in accordance with the PN-EN 71-2, PN-EN 71-3 standard.

IMPORTANT:

All products manufactured by Stelmet S.A. are dedicated to the creation and arrangement of light garden architecture, only for private use. Our products are not intended for commercial use or public places.

The manufacturer absolutely does not recommend coating wood used outdoors with substances that form a film-forming coating that is impermeable to moisture and air.

Stelmet products of small garden architecture are intended for outdoor use, therefore the storage of products must also take place outdoors. The products must not be stored inside closed unventilated rooms (warehouses, flats, production floors etc.), as this can lead to the risk of warping, formation of mould or fungi shreds.

Wood is a living material which dimensions, appearance, weight, form and colour may change without affecting the functionality or quality of the end product. Therefore, some of its properties are not subject to warranty; these properties particularly include:



1. Resin and resin leaks



Resin leaks occur on the surface of wood in the form of sticky stains of yellow or white colour, and are a natural phenomenon for coniferous wood. High temperature is a factor that favours their appearance. It is best to remove them with a spatula and then remove the residues with non-aggressive solvents (gasoline, turpentine, ammonia, nitro solvent).

Coniferous wood should not be covered with varnishes, as the resin flowing out of the wood may damage the varnish coating, causing it to peel off.

Due to the characteristics of pine wood and spruce, resin leaks are a natural phenomenon and are acceptable in our products.

2. Salt blooms and discolorations from preservative



Salt blooms form on the surface of the wood and are white in colour. They can be easily removed with a water-diluted cleaning detergent, e.g. a dish soap.

Discolorations from the preservative occur in the form of greenish spots and streaks; they are the result of the reaction of the agents contained in the preservative with natural wood constituents. These changes disappear over time.

Such blooms are particularly visible in the knotted areas. They have no negative effect on the wood whatsoever and are the result of a properly carried out vacuum-pressure treatment.



3. Mould



Mould is visible on the surface of the wood in the form of white, grey or black mycelium and fruit body shreds.

Despite the vacuum treatment, mould may still appear on the wood surface, especially when stored in the dark and damp areas without ventilation. Additional favourable conditions for mould formation are high temperature and humidity. Adverse appearance may be rectified by washing (with vinegar, alcohol or chlorine) or wiping off. Afterwards, the areas that have been cleaned from the blooms must be protected again. This defect has no destructive effect on the wood and does not affect its strength.

4. Decolorations/Discolorations / Greying/Tone change



The natural colour of the wood varies greatly even within a single plank. This is due to the natural characteristics of the wood structure. Treatment often aggravates these differences depending on the target colour. Colour changes due to the influence of weather conditions, especially UV rays on products already installed, are also natural. At first, the wood changes colour to honey and then becomes grey. These changes do not adversely affect its durability and are its natural feature. This process can be slowed down by protecting the wood with the measures referred to in point **"Recommendations for the care of garden architecture products"**.

5. Dimensional tolerance

Dimensional changes are related to the swelling and shrinking of wood which - being a natural raw material - adapts to the conditions prevailing in its immediate environment. Swelling is an increase in its dimensions due to an increase in the water content of the wood. Shrinkage of wood is the opposite of swelling, where the dimensions decrease due to the decrease of water content. These changes are directly related to the change in wood moisture, which is dependent on changing environmental (atmospheric) conditions, such as humidity and air temperature. Therefore, the dimensional tolerances are natural and do not constitute a defect - they may vary by ± 6 %. This phenomenon results in cracks and warping (deformation).

6. Deformations



Description	Drawing	Poles	Fences	Planks, deck tiles, tree poles
Krzywizna podłużna płaszczyzn Bow Gebogen		Max. 10 mm by 1 m	Max. 10 mm by 1 m	Max. 10 mm by 1 m
Krzywizna podłużna boków Crook Krom		Max. 10 mm by 1 m	Max. 10 mm by 1 m	Max. 10 mm by 1 m
Wichrowatość Twist Scheluw		Max. 2 mm by 25 mm	Max. 2 mm by 25 mm	Max. 2 mm by 25 mm
Krzywizna poprzeczna płaszczyzn Cup Hol		Inadmissible	Max. 5 mm per 10 cm slat	Max. 5 mm per 10 cm slat

During the life of the wood, i.e. the intake and release of moisture from the air, wood may be subject to certain deformations. As can be seen from the table below, the deformations can take different forms. Deformations of this type are a natural feature of wood, and - in most cases - do not affect the functional properties of products.

7. Core



The core is the physiological axis of the trunk. When cut lengthwise, it has the form of a narrow, dark-coloured band, while on the cross-section it has the appearance of a characteristic dot. This is a natural feature of wood.

8. Knots







Knots are parts of the branches that grow in wood and are present in all species of wood. Knots are an inseparable part of the wood and are a characteristic feature that emphasizes its charm and unique appearance. With products of small garden architecture they are not quality defects. During the use of the products, especially during warm months, holes from loose knots may appear which are a natural feature of the wood and are not subject to warranty.

9. Cracks





A crack is a rupture of wood tissue along the fibres usually caused by wood drying out or by rapid temperature drops (frost). The most visible cracks are found in products that contain a wood core.

Changing weather conditions during the use of garden products may cause further cracks and deepening of existing ones.

Cracks formed on natural and treated wood are a natural feature and do not adversely affect the durability and stability of the wood.

10. Roughness/Coarseness/Tendril



Despite our best efforts and the use of state-of-the-art woodworking machinery and tools, fragments of rough and coarse surfaces can sometimes occur. This is directly due to the heterogeneous structure of the wood and situations in which the workpieces have to be worked in the direction opposite to the fibres. The most common cases of this type occur in the vicinity of knots and in the case of unfavourable distribution of annual growths. This is a completely natural condition.

In the case of transverse cutting, the ends of the parts can also have tendril, which is another natural residue of woodworking. Tendril may be removed by cutting them off with a sharp knife.

