

**Waterproof plywood for outdoor use as a supporting element****Characteristics:**

Water resistant plywood is a big surface plywood material composed of odd number of plies, glued to each other perpendicularly to fibre direction by a formaldehyde adhesive. According to the ČSN EN 636 is this plate determined to be used in protected outdoor environment. It is necessary to ensure the aeration, protected position and surface finish. Functional characteristics and demands for this type of plywood for using in building industry are stated in ČSN EN 13986.

**Basic technical parameters****Humidity of plates**

Humidity is measured according to the norm ČSN EN 322.

Tolerances are stated according to the reference humidity 10 plus minus 2 %. For external use it is highly recommended plates acclimatization.

**Density of plates**

Density will be done according to the ČSN EN 323. According to the wood species the density is 500 - 550 kg/m<sup>3</sup>.

**Mechanic properties**

Mechanic properties of plywood for use in humid environment determine their possibility as a supporting element. It is the strength of bending and a modulus of elasticity of bending. These properties are tested at the same time according to the norm ČSN EN 310. The results are according to the norm EN 326-1. For instance for the thickness of 18 mm are determined classes F 25/10 E 50/20.

**Sticking**

Resistance against humidity is stated as a quality of sticking.

The quality of sticking must be in accordance with the demands for the class 3 according to the ČSN EN 314-2.

This norm determines the method of stating the quality of glued plywood through slip method. The process of preparation of trial samples is done according to the points 5.1.4. An average slip strength is 1,32 Mpa.

**Use**

The plywood is used in building industry, for floors, wooden wrappings. It is not recommended to use this plywood in the environment where humidity and warm are changing. The glued joint is waterproof but under being wet and dried again there is an enormous strength that can cause the fail in this joint. By duration of humid, non-aeration there is a danger of vermin attack.

Being used in a humid environment the plate should be finished for instance with phenol foil. This surface finish is valid for sides as well. Bei absorption of humidity the plate can change its dimension and shape. This fact should be considered by finish use. There could be so called

"spallings" in the top veneers of plates due to the influence of outdoor environment. The cause is in the structure of spruce wood and in the technology of peeling veneers.

**Transport and storage**

The plates in creates are bound with steel bands and the joint of the band and plate is protected by a protective corner. The creates are lying on 2 - 3 sticks. It is good for a regardfull manipulation and the plates are not on the ground. Sometimes are the sticks made firm to the packet. By stocking it is not allowed for the plates to be on their side. The plates should be stored under the roof.

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