



Cement-bonded particle boards (CBPB)

www.csp-svir.ru

+7 (812) 600 31 06



"CSP-Svir", Ltd was established in 2000 on the basis of the wood processing plant, a city-forming enterprise in Lodejnoe Pole, Leningrad region.

The enterprise is equipped with German equipment "Bison GmbH", one of the leading engineering companies in Europe.

Technical equipment makes it possible to produce up to 30,000 cubic meters of the highest-quality cement-bonded particle boards (CBPB) per year. The factory has its own railway branch, which allows to ship the CBPB by wagons.

In the North-West region of the Russian Federation such a plant is alone.

The incoming raw materials and products are fully controlled in the technical laboratory of the plant. CBPB are manufactured in accordance with the requirements of EN 13986:2004+A1:2015

Sales office:

112/2 lit "Z", Obukhopvskoj oborony pr. Office 405

192012, St. Petersburg, Russia

Tel/Fax: +7 (812) 676-37-98, +7 (812) 676-37-99

E-mail: sales@csp-svir.ru

Cement-bonded particle boards (CBPB)

Description

Cement-bonded particleboard (CBPB) was first commercially manufactured in the early 1970s. The panel is a mixture of wood particles and Portland cement together with mineral additives. The first impression of the panel is that it is grey in color, has a smooth almost polished surface and is heavy. This initial assessment of the panel fails to appreciate its outstanding merits especially in terms of reaction to fire, durability, stability, sound insulation and stiffness.



Applications

- Fixed formwork for monolithic construction and foundation construction
- Sandwich panels, building blocks
- Internal wall construction
- Exterior finishing of houses and buildings;
- Interior finishing of dry and moist rooms;
- Repair, restoration, and reconstruction work.
- Ventilated facades
- Substrate, roof insulation
- Base for soft roofing
- Prefabricated houses
- Rough floors
- Partitions (soundproof, fireproof)
- Dry, floating floor screed
- Warm floor
- Modular houses
- Flat roofs
- Balcony fencing and floors
- Tunnel cladding
- Agricultural buildings
- Construction of cabling ducts
- Worktops
- Window-sills

Composition

Following storage for at least 3 months, the debarked softwood logs of selected species are reduced to flakes some 10mm to 30mm in length and 0.2mm to 0.3mm in thickness using drum-knife flaking machines. After passing through a hammer mill, the flakes are separated into surface and core material by screening, and are then mixed with Portland cement and water in the ratio by weight of:

- cement 60%
- wood 20%
- water 20%

Small quantities of chemicals are added to the wet mix; one of their purposes is to accelerate cement setting.



Storage and handling

Careful storage and handling is important to maintain panels in their correct condition for use; therefore CBPB must be protected from rain and accidental soaking. During transport, it is particularly important to keep edges well covered. Panels should be stored flat in an enclosed, dry building. When handling panels, the edges and corners should be protected against damage and care should be exercised in the carriage of thin panels.

Specification

CBPB manufactured in Europe must now be specified in accordance with BS EN 634-1 Cement-bonded particle boards. Specification. General requirements.

CBPB that is used in construction must comply (by law) with the Construction Products Regulation (CPR) by compliance with BS EN 13986; this standard calls up BS EN 634 which is in two parts:

- BS EN 634-1 Cement-bonded particle boards. Specification. General requirements
- BS EN 634-2 Cement-bonded particleboards. Specification. Requirements for OPC bonded particleboards for use in dry, humid and exterior conditions



TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Test Institute for Construction Prague
Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Oznamovaný subjekt, Subjekt pro technická posuzování, Certifikační orgán, Inspekční orgán / Accredited Testing Laboratory, Authorized Body, Notified Body, Technical Assessment Body, Certification Body, Inspection Body, Prosecká 811/76a, 190 00 Praha 9 - Prošek, Czech Republic

Notified Body 1020

CERTIFICATE OF CONFORMITY OF THE FACTORY PRODUCTION CONTROL

No. 1020-CPR-070052969

In compliance with Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product:

Cement-bonded particleboard

intended for internal and external use as structural and non-structural components, unfaced

Thickness (in mm): 8, 10, 12, 16, 20 and 24

Reaction to fire class: B-s1, d0 (thickness 10 mm and more)

Formaldehyde class: E1

Modulus of elasticity in bending: Class 1 (for all thicknesses)

Bending strenght: $\geq 9 \text{ N/mm}^2$ (for all thicknesses)

placed on the market under the name of the producer

OOO CSP-Svir

Pr. Lenina, d. 76A

Lodeynoye Pole, Leningrad Region

187700, Russian Federation

INo: 4709006786

and produced in the manufacturing plant:

Pr. Lenina, d. 76A

Lodeynoye Pole, Leningrad Region

187700, Russian Federation

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard

EN 13986:2004+A1:2015

under system 2+ are applied and that


the factory production control is assessed to be in conformity with the applicable requirements.

This certificate was first issued on 26/09/2017 and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified factory production control certification body.



The stamp of the Notified Body 1020

Ostrava, September 26, 2017


Vojtěch Šebek
Deputy manager of the Notified Body

Density mass and panel size

Panel density is a function of the percentage volume of cement used, together with the degree of pressure exerted on the mat.

Standard density is from 1100 to 1400 kg/m³.

Panel sizes commonly available are 1200mm × 3200mm in thicknesses of 8 mm to 24 mm.

Biological attack

CBPB because of its high alkalinity (pH 11) will not normally be attacked either by wood-boring insects common in temperate or tropical climates or by fungi even at high moisture contents.



Physical properties

(in compliance with EN certificate of conformity)

Cement-bonded particle boards (CBPB) intended for internal and external use as structural and non-structural components.

- Reaction to fire class: B-s1, d0
- Formaldehyde class: E1
- Modulus of elasticity in bending: Class 1
- Bending strength: ≥ 9 N/mm²

Placed on the market under the name of producer:

OOO CSP-Svir,
pr. Lenina 76A, Lodeynoye Pole, Leningrad region
187700, Russian Federation
Ino: 4709006786



Mechanical joints and fixings

Wherever possible, fittings that depend upon face fixing should be selected; fittings that depend upon the expansion of a component inserted into the panel edge should be avoided. Conventional woodworking fixings and techniques can be applied to CBPB which provides good holding power for screw fixings into the panel faces. Edge screwing is possible; in panels greater than 16mm in thickness, pre-drilled holes are required. Countersunk parallel core screws should be used in both edge and face fixings because they have greater holding power than conventional wood screws. A high ratio of overall diameter to core diameter is desirable. Because of the high alkalinity of the panel, stainless steel or galvanized screws with a diameter up to 4.2mm should be used. Drill pilot holes for all screw fixings. Typically, the holes should be 85% to 90% of the screw core diameter. Fixings into the panel face should not be within 15mm of edges of panels up to 16mm in thickness (20mm for panels up to 22mm in thickness) and within 40mm of the corners. Manual nailing of serrated or twisted nails up to 3.1mm in diameter is possible in panels up to 12mm in thickness. Above 12mm, either pre-drilled manual insertion or none predrilled pneumatic fixing should be used. Nails must be flat-headed and galvanized, sherardized or of stainless steel. Panels can also be fitted together using galvanized or stainless steel clips.

