

CLASSIFICATION OF REACTION TO FIRE FIRES-CR-125-10-AURE

Cement-bonded particleboard CETRIS® / CETRIS® AKUSTIC



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CLASSIFICATION OF REACTION TO FIRE

with extended field of application

FIRES-CR-125-10-AURE

Name of the product: Cement-bonded particleboard CETRIS® / CETRIS® AKUSTIC

Sponsor: CIDEM Hranice, a.s.
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1. INTRODUCTION

This classification report defines the reaction to fire classification assigned to element: cement-bonded particleboard CETRIS® / CETRIS® AKUSTIC in accordance with the classes given in STN EN 13501-1 + A1: 2010.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The element, cement-bonded particleboard CETRIS® is used in building industry as part of vertical and horizontal building constructions, non-loadbearing walls and partitions, wall cladding, curtain walls, shaft walls, external loadbearing and non-loadbearing walls, floorings, raised floors, cladding of timber and steel constructions for increasing of fire resistance, as membrane of the suspended ceiling according to EN 13964, eventually with type designation CETRIS® AKUSTIC the board is used as acoustic wall and ceiling facing, which is fixed to steel supporting construction in combination with mineral wool, placed behind the boards.

2.2 PRODUCT DESCRIPTION

Cement-bonded acoustic particleboards CETRIS® consist of wooden timber mass, cement, water, hydration ingredients and surface finishing. The holes with diameter of 12 mm are drilled through the boards CETRIS® AKUSTIC and are equally placed along the whole surface of the boards in distances of 32 mm.

Contents of individual components (volume percentage):

- wooden particles 60 %;
- cement 22 %;
- water 15 %;
- hydration ingredients 3 %.

Thickness of boards: from 8 mm up to 40 mm;

Bulk density: 1350 kg.m⁻³.

Cement-bonded acoustic particleboard CETRIS® are produced with following surface finishing:

Table No. 1

BASIC	smooth surface, without surface finishing;
PROFIL	relief surface, without surface finishing;
AKUSTIC	smooth surface, equally drilled holes;
PLUS	smooth surface, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 140 - 220 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board;
PROFIL PLUS	relief surface, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 140 - 220 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board
FINISH	smooth surface, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • top coat BTAitop 1000A/CTS, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;
PROFIL FINISH	relief surface, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • top coat BTAitop 1000A/CTS, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;



AKUSTIC FINISH	smooth surface, equally drilled holes, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • top coat BTAitop 1000A/CTS, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;
LASUR	smooth surface, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • varnish BTAitop 1000A/CTS-lazura, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;
AKUSTIC LASUR	smooth surface, equally drilled holes, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • varnish BTAitop 1000A/CTS-lazura, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;
LASIN	smooth grinded surface, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • varnish BTAitop 1000A/CTS-lazura, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;
AKUSTIC LASIN	smooth grinded surface, equally drilled holes, with surface finishing: <ul style="list-style-type: none"> • base coat BTAitop 1000A/CRT, area density 240 - 300 g/m² (in wet state), applied on the face/reverse side of the board and on the side edges of the board; • varnish BTAitop 1000A/CTS-lazura, area density 160 - 200 g/m² (in wet state), applied on the face side of the board and on the side edges of the board;
DOLOMIT NEW	smooth surface, with surface finishing: surface finishing on the front face : <ul style="list-style-type: none"> • paint Waterstop, water proof paint on reverse side, area density 0,100 kg/m²; • epoxy resin EPOXY-β-2, water proof glue used as base for crushed marble on the front face, area density 0,200 kg/m²; • crushed marble, area density 2,5 – 3 kg/m², grain size 3 mm;

Note.: manufacturer of paint and varnish BTAitop 1000A/CRT, BTAitop 1000A/CTS and BTAitop 1000A/CTS-lazura is BTA Industry a.s., K velké Ohradě 776, 155 00 Prague 5, CZ. Manufacturer of individual components of DOLOMIT NEW is UAB "Vilsoplat", Titnago g. 19, 023 00 Vilnius, Lithuania.

Cement-bonded particleboards are as part of individual building constructions fixed to timber and steel supporting constructions by steel screws in maximum spacing of 300 mm.

Cement-bonded particleboards CETRIS[®] AKUSTIC are fixed to supporting construction which consists of steel galvanized profiles (60 x 27 x 0,6) mm, with steel screws (Ø 4,2 x 25) mm in max. spacing of 300 mm.

It is possible to apply the layer of insulating material (building constructions without cavity), e.g. mineral wool Orsil HARDSIL, Orsil N (manufacturer SAINT-GOBAIN ORSIL s.r.o. Častolovice, CZ) to the boards CETRIS[®], eventually different mineral wool with minimal bulk density of 60 kg/m³ and reaction to fire class A1, eventually building constructions are manufactured with cavity (without insulation).

The layer of insulating material, e.g. mineral wool with minimum bulk density of 22 kg/m³ and minimum reaction to fire class A2-s1, d0 is placed to boards CETRIS[®] AKUSTIC to inward side of construction.

Joints of particleboards CETRIS[®] are without mastic or sealed with mastic DEXAFLAMM-R (manufacturer: TORA, spol. s r.o., CZ).



3. EXTENDED APPLICATION REPORTS AND TEST RESULTS IN SUPPORT OF CLASSIFICATION

3.1 EXTENDED APPLICATION REPORTS

No.	Name of laboratory	Name of sponsor	Report No.	Date of issue
[1]	FIRES, s.r.o., Batizovce, SK	CIDEM Hranice, a.s., CZ	FIRES-ER-025-10- NURS	30. 08. 2010

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with classes defined in clause 11.7 of STN EN 13501-1 + A1: 2010.

4.2 CLASSIFICATION

The element, cement-bonded particleboard CETRIS® / CETRIS® AKUSTIC, is classified according to the following combinations of performance parameters and classes as appropriate.

**Reaction to fire classification:
A2-s1, d0**

4.3 FIELD OF APPLICATION

It is possible to use product:

- in horizontal (apart from floorings) and also in vertical position;
- without surface finishing;
- with surface finishing according to clause 2.2 (all the colour tones);
- without cavity;
- with cavity (except boards CETRIS® AKUSTIC);
- with timber supporting construction (except boards CETRIS® AKUSTIC);
- with steel supporting construction;
- gaps of the joints not sealed by mastic;
- gaps of the joints sealed by mastic (except boards CETRIS® AKUSTIC).

4.4 REACTION TO FIRE PARAMETERS

Thickness	- change in the cement-bonded particleboards CETRIS® and CETRIS® AKUSTIC thickness is allowed from 8 mm to 40 mm; - change in the mineral wool thickness is allowed; - change in coats thickness is allowed within the scope of manufacturing tolerances;
Bulk density [kg/m ³]	- change in the bulk density of boards CETRIS® and CETRIS® AKUSTIC is allowed within the scope of manufacturing tolerances; - increase in the bulk density of mineral wool is allowed;
Area density [kg/m ²]	- change in the area density of coats is allowed within the scope of manufacturing tolerances;
Product composition	- change in content of individual boards acc. to cl. 2.2 shall not be changed; - only the coats according to clause 2.2 may be used for surface treatment of boards;



Product composition	<ul style="list-style-type: none">- only the mineral wool with A2-s1, d0 reaction to fire class may be used for insulation;- supporting construction may be made from timber (except boards CETRIS® AKUSTIC), wood based materials (except boards CETRIS® AKUSTIC) and from steel, or other materials with reaction to fire A1;
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5. LIMITATIONS

This classification document does not represent type approval or certification of the product.

The classification is valid provided that the product, field of application, standards and regulations are not changed.

Approved:

Ing. Štefan Rástocký
head of the testing laboratory



Signed:

Ing. Juraj Akuratný
technician of the testing laboratory