



## 1 Product composition

CEDRAL fibre cement strips consist of the following:

- Portland cement
- mineral fillers
- natural organic reinforcing fibres
- additives
- for the different covering colour shades: water-based acrylate dispersion on the image side and back coating on the back
- for the natural basic colour: colourless water-repellent impregnation on the image side

## 2 Production method

CEDRAL fibre cement strips are manufactured on a Hatschek machine and are autoclaved. The image side of CEDRAL Classic is provided with a wood nerve profile. CEDRAL are then finished with various coatings depending whether a covering colour or natural basic colour is used. The ends of wood colored CEDRAL "CL 1xx RC" are treated with a colourless water-repellent impregnation.

## 3 Dimensions and tolerances

Thickness	Possible fixing method
10 mm	Screwing, nailing

Dimensions (h x L)

CEDRAL CLASSIC	CEDRAL SMOOTH
190 x 3,600 mm	190 x 3,600 mm

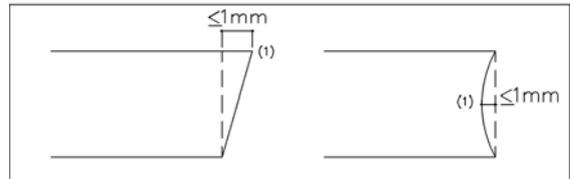
Tolerances

Thickness	+/- 10%
Length	+/- 5.0 mm
Width	+/- 2.0 mm

Squareness	1 mm <sup>(1)</sup>
Straightness lengthwise	3 mm

Weight (ex-works)

CEDRAL CLASSIC	CEDRAL SMOOTH
11.2 kg/piece	11.2 kg/piece



## 4 Colour

CEDRAL are available in the following profiles:

- Classic: surface with wood nerve profile
- Smooth: slightly structured surface

Remarks concerning the wood colours "CL 1xx RC":

- Differences in colour as with staining of wood can occur within one or between different CEDRAL
- Cut edges have to be treated with the hydrophobation product ETERSILAN. Not or poorly treated cutting edges can lead to moisture stains on the front side.
- Applications with visible fixings (e.g. vertical or flat horizontal installation) are not advised.

For an overview of the standard colours we refer to the most recent ETERNIT colour chart. However it is technically impossible that this chart represents the colours realistically. Therefore the final choice of the colour has to be made with samples. The naturally coloured CEDRAL C00 are weather-resistant and are characterised by natural hues in the sheet and changes in colour through the effects of light and moisture. Other colours are available upon request for minimum orders. The risk of colour differences between the various sheets decreases as the whole party is ordered at once.

Colour differences are measured according the CIELAB colour model. Tolerated colour differences on a façade for full coated sheets are  $\Delta L^* = \pm 1.0$ ,  $\Delta a^* = \pm 0.4$ ,  $\Delta b^* = \pm 0.4$  en  $\Delta E^* = \pm 1.2$ . Colour differences of wood colours "CL 1xx RC" are measured according a simplified CIELAB colour model, by which only the lightness of the colour is checked. Tolerated colour differences are  $\Delta L^* = 5.0$ . Color variegation may be accentuated by the effects of light and the viewing angle.



## 5 Technical properties

Average values according to the European standard EN 12467 'Fibre-cement flat sheets', which describes classification and most testing methods.

<i>A. Testing according to ISO quality management system</i>				
Density	Dry	EN 12467	1,300	kg/m <sup>3</sup>
Bending strength	Ambient, ⊥	EN 12467	23.0	N/mm <sup>2</sup>
	Ambient, //	EN 12467	11.00	N/mm <sup>2</sup>
Modulus of elasticity	Ambient, ⊥	EN 12467	7,500	N/mm <sup>2</sup>
	Ambient, //	EN 12467	5,500	N/mm <sup>2</sup>
Hygrical movement	0-100%, mean	EN 12467	1.75	mm/m
Porosity	0-100%		23	%
<i>B. Classification</i>				
Durability classification		EN 12467	Category A	
Strength classification		EN 12467	Class 2	
Fire reaction		EN 13501-1	A2-s1-d0	
<i>C. Type test or best estimate</i>				
Impermeability test		EN 12467	Ok	
Warm water test		EN 12467	Ok	
Soak dry test		EN 12467	Ok	
Freeze thaw test		EN 12467	Ok	
Thermal expansion coefficient	α		< 0.01	mm/mK
Thermal conductivity	λ		0.212	W/mK

## 6 Advantages

Providing the application guidelines are followed, ETERNIT fibre-cement sheets have the following superior mix of properties compared to other materials:

- fire safe (no fire ignition, no spread of fire)
- sound insulating
- resistant to extreme temperatures
- water resistant (if in compliance with application guideline)
- resistant to many living organisms (fungi, bacteria, insects, vermin, etc.)
- resistant to many chemicals
- environmentally friendly, no harmful gas emissions

In addition, CEDRAL fibre cement strips have the following specific properties:

- very little maintenance in comparison with wood because of its durable coating
- aesthetic surface in different covering colours
- can be worked on with joinery machinery
- screw and nail without pre-drilling

## 7 Applications

Exterior walls: exterior wall cladding, covering of gable ends, dormer windows

## 8 Available factory finishing

No further finishing is offered with production.



## 9 Application data

!!: Sawing and drilling must take place in a dry environment. For decorative applications, sawdust and drillings must be immediately removed from the sheet with a dry micro-fibre towel. Not removed sawdust and drillings can cause permanent stains.

During the mechanical machining of panels, adequate machinery with dust extraction and/or ventilation should be foreseen. If dust extraction is not efficient, dust masks of type FFP2 or better according EN149:2001 should be used.



### Sawing:

When working on the sheet it must be sufficiently supported so that it does not sag. The sawing bench must be very stable and may not vibrate. The sheet may not be under tension when sawing. The sheet must be free of vibration and tension during sawing for a good saw cut. Cutting in the wrong way can cause delamination problems of the edge.

- Hand circular saw with rail or stationary sawing machines: fast rotation with Universal Eternit cutting blade available at Leitz-Service (available diameters: 160, 190, 225 and 300 mm)
- Jigsaw with carbide-tipped tooth cutting blade type T141 HM from Bosch (available from Eternit)
- handsaw with carbide-tipped tooth cutting blade
  - Sawed edges must be smoothed with sandpaper (grain P80)



Cedral shears

Cutting : Cedral can be cut to length with the Cedral shears (available from Eternit)

### Drilling:

The sheet should be supported around the hole to be drilled (e.g. by a wooden surface).

- for holes: carbide-tipped twist drill (or completely in carbide) with a 60° nose angle (available from Eternit); available diameters: 5.0 – 6.0 – 7.0 – 8.3 – 9.5 – 11.0 mm
- for round apertures: hole saw with carbide-tipped teeth (e. g. type Pionier from Metabo)
  - Sawed edges must be smoothed with sandpaper (grain P80)

### Fastening accessories:

Depending on the application the following fastening accessories can be used (see application instructions for more information).

- Screwing: can be screwed directly without predrilling. Automatic screwing is also possible.
- Nailing: can be nailed directly without predrilling, manually and mechanically. The head of the nail may not be driven in the sheet. The pneumatic nailing machine is regulated with constant depth. The use of nailing machines with gas cartridge is not advised because of the unstable execution quality.

### Sealant:

Only use neutral sealants. Non-neutral silicones or thiokols can result in spots.

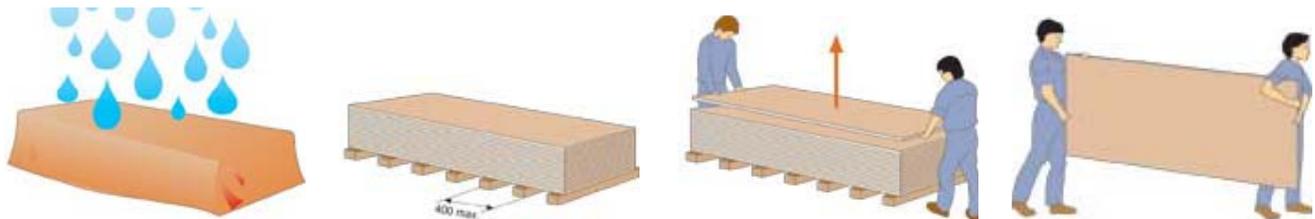
### Retouching:

For aesthetic reasons it is recommended to retouch CEDRAL on the sawn visible edges and in the event of damage. Retouching must take place with the appropriate coating system and in accordance with the coating conditions. The surface to be painted must be dry and free of dust and grease (dust and/or clean first if necessary). The coating supplied must be stirred well and may not be diluted. Retouch the surface with a brush or roller. **NOTE!** Retouching must be done with care and with respect for the appearance: only retouch the surface to be painted.

### Coating:

CEDRAL S00 can be finished with a primer and topcoat for exterior use with water-based acrylate dispersion. When repainting CEDRAL one must first sand slightly before applying a new topcoat. Coating advice is available from ETERNIT.

## 10 Handling



The sheets are packaged on pallets. They are to be transported under a tarpaulin. The sheets must be horizontally stacked on a flat surface. The sheets must always be sufficiently supported so that they do not sag. The sheets must be stacked in a dry ventilated space. If the sheets are stored outside, they must always be protected against rain by a tarpaulin or plastic cover. If the sheets do become wet in the packing, all packaging must be removed and placed in a way that they can dry out thoroughly. It is recommended to allow the



# CEDRAL

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sheets to acclimatise in the space where they are to be used. A sheet must always be lifted from a stack by two persons and then be carried vertically. A foil always has to remain between the stacked sheets in order to prevent paint damage.

Wood coloured CEDRAL with a bad, incomplete or non waterproof cover or that are not covered at all can suffer from important colour differences. Humidity penetrating through the edges and/or back of the CEDRAL strip will cause (dark) discolouration.

### 11 Health and safety aspects

During the mechanical machining of panels, dust can be released which can irritate the airways and eyes. Apart from this, the inhalation of fine (respirable size) quartz containing dust, particularly when in high concentrations or over prolonged periods of time can lead to lung disease and an increased risk of lung cancer. Depending on the working conditions, adequate machinery with dust extraction and/or ventilation should be foreseen. For more ample information, please check the Safety Data Sheet (based on 1907/2006/EC, article 31).

### 12 Warranty

The warranty on the product is only valid if the ETERNIT application guidelines are respected. If in any doubt regarding the suitability of ETERNIT sheets in any given application, it is advisable to request specific recommendations from ETERNIT. Under no circumstances can ETERNIT be held liable for applications of their sheets implemented without approval from ETERNIT.

### 13 Maintenance and cleaning

For minor soiling, washing with a mild household detergent or soft soap solution followed by rinsing with clear water.

### 14 Certification

The manufacturer can - within the framework of the European Regulation N° 305/2011 (CPR) - present the Declaration of Performance (DOP) of the product such confirming that the product has a CE marking. The CE marking guarantees that the product is in accordance with the basic requirements determined by the harmonized European standard and applicable to the product. The Declaration of Performance is presented in accordance with the CPR and can be found at [www.infodop.com](http://www.infodop.com). The product CEDRAL is delivered with the ATG-label (B) and the KOMO-certificate (NL). The manufacturer is also ISO certified. CEDRAL has an EPD (Environmental Product Declaration).



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### 15 More information

Information about the various applications can be found in the ETERNIT application guidelines. They can be found on the website or be obtained on demand by phone. Information about external suppliers can also be downloaded from the website.

This product information sheet replaces any previous editions. ETERNIT reserves the right to amend this information sheet without prior notice. Readers should always satisfy themselves that they are referring to the most recent version of this document. No part of this text can be changed without permission of ETERNIT.



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