

CARAT

Product Information Leaflet¹

1. Product composition

CARAT sheets consist of the following:

- Portland cement
- mineral fillers
- organic reinforcing fibres
- additives
- transparent water-based acrylate dispersion on the face
- vinylidene chloride copolymer (PVDC) with some paraffin wax for anti-blocking on the back

1. Production method

CARAT sheets are manufactured on a Hatschek machine and are compressed and air cured. CARAT is then finished with two transparent water-based acrylate finishes on the face and vinylidene chloride copolymer (PVDC) with some paraffin wax for anti-blocking on the back.

2. Dimensions and tolerances

Standard thickness: 8 mm (on special order, 12mm thick panels can be manufactured.)

	Untrimmed	Trimmed
Anthracite, Medium Grey	1280 x 2530 mm	1250 x 2500 mm
Anthracite, Medium Grey	1280 x 2830 mm	1250 x 2800 mm
Anthracite, Medium Grey	1280 x 3130 mm	1250 x 3100 mm
Ivory , Rubin Red	1250 x 2530 mm	1220 x 2500 mm
Ivory , Rubin Red	1250 x 3070 mm	1220 x 3040 mm

	Untrimmed	After cutting
Thickness	+/- 0.5 mm	+/- 0.5 mm
Length and width	+/- 5.0 mm	+/- 1.5 mm and +/- 1.0 mm if LxW < 1x1 m
Squareness	2.0 mm/m	1.0 mm/m

4. Weight

Thickness	Weight
8 mm	15.4 kg/m ²
12 mm	22.8 kg/m ²

¹ This product information leaflet replaces any previous editions. E.P.O. reserves the right to amend this information leaflet without prior notice. Readers should always make sure to consult the most recent version of this document.

5. Colours²

CARAT has a smooth surface and is through coloured in 4 colours:

- Anthracite
- Medium Grey
- Rubin Red*
- Ivory*

* available on request in minimum quantities.

6. Technical properties (average values)

Density		: 1650 kg/m ³
Bending strength ³ (24h immersed in water)	//	: 24.0 N/mm ²
	⊥	: 17.0 N/mm ²
Modulus of elasticity		: 15000 N/mm ²
Maximum water absorption		: 20 %
Moisture movement (30-90%, mean)		: 1.0 mm/m
Thermal expansion coefficient		: 10*10 ⁻⁶ m/mK
Thermal conductivity coefficient		: 0.6 W/mK
Frost resistance		: frost resistant
Reaction to fire according to EN13501-1		: A2

CARAT meets the requirements of the European Norm EN 12467 and is CE-marked.

7. Advantages

- No flame spread, no fume development, no toxic gasses
- resistant to high temperatures
- water resistant
- resistant to fungus, bacteria, insects, vermin, etc.
- resistant to many chemicals
- environmentally friendly, no harmful gas emissions
- frost resistant
- high dimensional stability
- strong and rigid sheet
- through coloured
- modern appearance

² See the most recent colour chart for an illustration of the colours.

³ A safety factor should be applied whenever permissible loads are calculated.

8. Applications (not exhaustive)⁴ (see also application guidelines for certain applications)

- Exterior : wall cladding, balcony panels, parapets, soffits
- Interior lining

9. Working guidelines (see also working guidelines ETERNIT flat sheets)

Cutting:

- Stationary saw, slow rotation with tungsten carbide-tipped blade or fast rotation with diamond cutting blade without teeth
- Hand circular saw (with rail), slow rotation with tungsten carbide-tipped blade or fast rotation with diamond cutting blade without teeth
- Jigsaw with tungsten carbide-tipped tooth cutting blade

Edge finish:

- a milling cutter
- fine emery cloth or sanding block

Drilling:

- for holes: tungsten carbide-tipped drill bit (or complete drill in tungsten carbide) with a 60° nose angle. Drilling without hammer !!
- for circular openings: hole saw or circular cutter, tungsten carbide-tipped.

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

!!: Cutting and drilling must take place in a dry environment. All dust must be removed immediately from the sheet with a dry towel to avoid permanent stains.

Fixing accessories:

The material of the fixing accessories (e.g. stainless steel, galvanised steel, phosphated steel) is chosen dependent on the application and the environment.

1) Gluing (concealed fixing):

CARAT can be fixed with structural adhesive. The back of the sheet must be sanded (sand paper P80) at the area where the glue is applied. The adhesive is to be used in accordance with the application guidelines and guarantee conditions of the manufacturer. Further information is available from E.P.O.

2) Screwing:

Screws with mushroom head
The CARAT sheets need to be pre-drilled

3) Riveting:

Stainless steel rivet and associated cylinder in accordance with the Astro-riveting system.

⁴ The applications for CARAT sheets set out in this document are for illustration only. If in any doubt regarding the suitability of CARAT sheets in any given application, it is advisable to request recommendations from E.P.O. . Under no circumstances can E.P.O. be held liable for applications which have not been approved by E.P.O.



Caulking:

Only use neutral mastics. Non-neutral silicones or thiokols can result in staining.

Health and safety aspects:

While the sheets are being processed, dust can be released which can irritate airways and eyes. It is recommended that a dust mask and safety goggles be worn. Appropriate dust extraction or proper ventilation should be used depending on the room in which the work is being carried out or the equipment being used. Long-term exposure to dust can be harmful to health.

10. Maintenance and cleaning (see also cleaning advice ETERNIT flat sheets)

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

11. Handling (see also working guidelines ETERNIT flat sheets)

The sheets are packed on pallets. They must be kept dry during transport. 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 stored in a dry ventilated space. If the sheets are stored outside, they must always be protected against rain by a tarpaulin or plastic sheet. If the sheets do become wet in the packing, all packaging must be removed and the sheets must be wiped dry and placed in a way that they can dry completely. A sheet must always be lifted from a stack by two people and then be carried on edge.

12. Guarantee

The guarantee and the guarantee conditions are available on request from E.P.O.



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