

DURIPANEL

Product Information Sheet¹

1 Product make-up

DURIPANEL sheets consist of the following:

- wood chips
- Portland cement
- wood mineralisation materials
- water

2 Production method

DURIPANEL sheets are manufactured using three application machines for the middle and surface layers. Following formation the sheets are compressed down to 1/3 of the dispensing thickness.

3 Dimensions weight and tolerances

	DURIPANEL	
Main application	Acoustic/Sheathing	
Compressed	Yes	
Autoclave	No	
Rectified	Yes	
Calibrated	No	
Bevelled edges	No	
Water repelling	No	
Colour surface	No	
Colour	Natural	
Thickness (mm)	10	12
Weight ex-works (kg/m ²)	12.5	15.0
Dimension (mm)	weight ex-works (kg/sheet)	
1,200x2,400	36.0	43.2
Tolerance	Complies with EN 634-2	
Thickness (mm)	± 0.5	
Length and width (mm)	± 3	
Squareness (mm/m)	<1.0	

¹ This product information sheet replaces any previous editions. MARLEY ETERNIT LTD 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.

4 Technical properties

The CE-mark is based on the European Standard EN 13986:2004 Wood based panels for use in construction-Characteristics, evaluation of conformity and marking and EN 634-2:1997 Cement Bonded Particleboards-Specifications -Part 2. Requirements for OPC bonded particleboards for use in dry, humid and exterior conditions.

Density	EN 323	1,250	Kg/m ³
Bending strength	EN 310	9.0	N/mm ²
Modulus of elasticity	EN 310	4,500	N/mm ²
Internal Bond	EN 319	0.5	N/mm ²
Swelling in thickness 24h	EN 317	1.5	%
Internal bond after cyclic test	EN 319 & 321	0.3	N/mm ²
Swelling in thickness after cyclic test	EN 317 & 321	1.5	%
Technical Class	EN 13986	Class 1	
Formaldehyde Class	EN 13986	Class E1	
Fire reaction classification	EN 13501-1	B-s1-d0	
Freeze thaw test	EN 1328	Ok	
Thermal expansion coefficient	EN 318	11x10 ⁻⁶	mm/m
Thermal conductivity coefficient	EN 13986	0.23	W/mK
Sound absorption co-efficient	Frequency Range	250-500 Hz	1000-2000 Hz
	EN 13986	0.10	0.30
Water vapour resistance factor		Wet Cup μ	Dry Cup μ
	EN 13986	30	50

5 Advantages

Providing the application guidelines are followed, MARLEY ETERNIT sheets have the following overall properties:

- fire resistant)
- high contribution to sound insulating systems
- good structural properties
- water resistant (in direct outdoor applications use vertically only and treat with water repellent)
- resistant to many living organisms (fungi, bacteria, insects, vermin, etc.)
- impact resistant
- environmentally friendly, no harmful gas emissions
- frost resistant

In addition, DURIPANEL has the following specific properties:

- can be worked with joinery machinery,
- screw and nail without pre-drilling (recommended fixings only)

6 Applications (not exhaustive)²

- sound absorption – can contribute to reduction in sound in roof, wall and floor constructions
- impact resistant cladding and sheathing panels

² The applications for MARLEY ETERNIT sheets set out in this document are only illustrational. If in any doubt regarding the suitability of MARLEY ETERNIT sheets in any given application, it is advisable to request recommendations from MARLEY ETERNIT LTD. Under no circumstances can MARLEY ETERNIT LTD be held liable for applications of their sheets implemented without their approval.

7 General application data

Duripanel can be installed with the same tools as wood panels manufactured with synthetic resin. Duripanel can be sawn, drilled, milled, ground and planed. It is recommended that for economical reasons only hard metal tools are used. The dust that is created during the processing of the panels contains no hazardous materials. However, for health reasons it is recommended that extraction be used. The relatively heavy type of dust that is created requires a suitable heavy-duty vacuum system.

Sawing

- Hand saws – handsaw with hard metal tips.
- Stationary sawing machines – Duripanel can be processed with wall mounted as well as horizontal saw beds. When sawing Duripanel it is possible to cut the same with counter-rotating as well as parallel movements (i.e. the direction of movement is identical to the rotation direction of the blade). Processing equipment with diamond-tipped tools represents an especially economical solution for the sawing and milling of panels
- Electric circular handsaws – with speed control and a dust extraction system. These hand held circular saws should always be passed along a guide rail or a guide strip in order to achieve a clean cut.
- Electric fret saws – fret saws are especially suitable for the cutting of curved edges and precision work. We would recommend fret saws with electronic control, oscillating lift and an extraction system. Suitable saw blades are hard metal coated.
- Cutting speed
The optimum cutting speed is between 30 – 60 m/s. (Advancing speed will depend on thickness, between 10 – 30 m/min)

Drilling

- Electric hand drill – all commonly available machines can be used. Drills with electronic control and HSS drills are especially suitable. Do not use hammer drills. Hard metal coated drill bits with a tip centring mechanism and a cutting edge or VHM drills are especially suitable for a continuous operation.

Milling

- Overhead milling cutters – suitable milling cutters for edge profiling and milling are widely available. Hard metal tipped tools and profile milling cutters with guide rings can achieve excellent results. A milling basket with an extraction system is recommended.

Grinding

- Electric hand grinders – belt or circular grinders can be used. However, they should be equipped with a suitable dust extraction system. We would recommend sand paper with a grain of 60-150.

Planing

- Electric hand plane – all commercially available machines can be used as long as they are equipped with a chip extraction unit and hard metal tipped plate knives. Electric hand planes are especially suitable for use during installation work within the edge areas as well as during the levelling, fitting and tapering of edges.



8 Surface finishes

- Alkalinity
All coatings must be stable in an alkaline environment, i.e. compatible with a pH value of 12. Coatings should consist of an alkali resistant paint.
- Diffusion density
The coating type should be the same for both sides in order to limit possible warping due to humidity changes. The back of the panel must be surface treated prior to installation, so that an equilibrium can be achieved following installation and coating of the front surface.
- Components
Coating systems must be used in such a way that base coats, intermediate coats and final coats match one another. Changing individual components must be agreed with the coatings manufacturer with regard to compatibility. Technical data sheets and manufacturer's working recommendations must be adhered to.

Health and Safety aspects:

Dust can be released while the sheets are being processed which can irritate airways and eyes. It is recommended that a dust mask and safety goggles be worn. Appropriate dust extraction or proper ventilation is to be provided 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.

9 Handling

The sheets are packaged on pallets. They are to be transported under a tarpaulin. Sheets are to be stacked on a flat surface in a dry, well ventilated room (in order to avoid condensation). The sheets must always be sufficiently supported so that they do not sag. If sheets are stored outside, they must always be protected against rain by a tarpaulin or plastic sheet. If the sheets become wet they should be wiped dry and placed in a way that they can dry out thoroughly. It is recommended that the sheets be allowed to acclimatise in the space where they are to be used. Individual sheets are to be lifted from the stack by two persons without dragging, and are to be carried vertically thereafter.

**Marley Eternit Ltd
Technical Services
Lichfield Road
Branston
Burton Upon Trent
DE14 3HD
Tel: 01283 722588
Website: www.marleyeternit.co.uk**