

# Fresh Sawn/Air Dried Oak Beams

Please contact one of our helpful experts for more information **+44(0) 1373 469905**

## What is Fresh Sawn / Air Dried Oak?

**Latin name** Quercus robur, Quercus petraea,

**Also known as** European oak, English oak, French oak,

**Environmental** Not listed in CITES. Available from well-managed sources.

**Distribution** Q. petraea produces the sessile or durmast oak, while the pedunculate oak is produced by Q. robur: both species occur throughout Europe including the British Isles and extend into Asia Minor and North Africa.

## Fresh Sawn / Air Dried Oak Properties

**The Tree** Both species reach a height of 18m to 30m or a little more depending upon growth conditions which also affect the length of the bole. When drawn up in forests at the expense of their branches, this may be 15m or so in length, but in open situations, the tree branches much lower down. Diameters are about 1.2m to 2m.

**The Timber** There is no essential difference in the appearance of the wood of either species. The sapwood is 25mm to 50mm wide and lighter in colour than the heartwood which is yellowish-brown. Quarter-sawn surfaces show a distinct silver-grain figure due to the broad rays. The annual rings are clearly marked by alternating zones of early-wood consisting of large pores, and dense late-wood.



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Conditions of growth accordingly govern the character of the wood to a great extent; for example, in slowly grown wood the proportion of dense late-wood is reduced in each annual growth-ring, thus tending to make the wood soft and light in weight.

The growth conditions in the various countries which export oak, vary considerably. The weight of oak varies according to type; that from the Baltic area, western Europe, and Great Britain being about 720 kg/m<sup>3</sup> and that from Central Europe about 672 kg/m<sup>3</sup> on average after drying.

So-called brown oak is the result of fungus attack in the growing tree. The fungus, *Fistulina hepatica*, causes the wood first to assume a yellow colour, then a richer brown or reddishbrown. A yellow-coloured streak sometimes appearing in oak is the result of another fungus, *Polyporus dryadeus*, but since very few tree diseases persist after the tree is felled, dried timber is no different from normal coloured wood, indeed, brown oak is often preferred for its decorative appeal.

**Drying** Oak dries very slowly with a marked tendency to split and check, particularly in the early stages of drying, and there is considerable risk of honeycombing if the drying is forced, especially in thick sizes. End and top protection must be provided to freshly sawn stock exposed to sun and drying winds, and sticker thickness should be reduced to about 12mm for stock piled in the open air during early spring and onwards until winter.

**Strength** Both the sessile and pedunculate oaks have well known and high strength properties, and those hybrid oaks developed from both types and common throughout Europe, are similar in their strength properties. \* MECHANICAL PROPERTIES Note: In BS 5268-2: 2002, there is a discrepancy between Tables 7 and 15 regarding characteristic density and strength classes for use in joint design.



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The values quoted here should be used, rather than those included in the 14 March 2002 edition of the Code.

Working Qualities Medium to difficult - the working and machining properties of oak vary with the mild to tough material which either machines easily or with moderate difficulty. These basic properties are concerned with growth conditions, but they may be exaggerated by indifferent drying methods which allow plain-sawn boards to cup, or severe case-hardening to develop, causing excessive wastage in planing and moulding, cupped stock in resawing, and greater degree of blunting of cutting edges. These must be kept sharpened, particularly where cross grain is present, and especially in planing highly-figured quarter-sawn surfaces where there may be liability for the grain to tear out at the junction of the wide ray-figure thus producing a shelly appearance. In general, oak finishes well from the planer or moulding machine although in some cases a reduction of cutting angle to 20° is preferable. The wood can be stained, polished, waxed, and glued satisfactorily, takes nails and screws well, except near edges, when the wood should be pre-bored, and takes liming and fuming treatments well.

**Durability** Durable

**Treatability** Extremely difficult, easy (sapwood)

**Moisture Movement** Medium

**Abrasions** Very Good

**Density** (mean, Kg/m<sup>3</sup>) 720 (density can vary by 20% or more)

**Chemical Properties** Iron staining may occur in damp conditions, similarly corrosion of metals.

**Physical Properties** High strength properties. Medium bending and crushing strength. Low stiffness and shock resistance.



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## Working with Fresh Sawn / Air Dried Oak

**Use(s)** Heavy structural use and construction.

**Colour** Yellow brown

## What can Timbersource Offer You?

Our fresh sawn / air dried oak beam stock can either be ordered fresh sawn or you can take advantage of the landed stock that has been air drying at the mill in France and in our yard. All our oak timber beams are graded in France to QPA/1 and better. Please bear in mind that if additional cutting is required then you may lose the QPA/1 grade. However, at Timbersource we have qualified graders that can re-grade the beam using the preferred TH grading system when strength is key to the project that is being undertaken.

As our beams are stored in both undercover warehouse and outside in our yard, the colour of the beams may darken down depending on how long they have been there. This effect is natural and quite common. Planing, sanding or blasting the timber will clean them up, if required.

Another factor important to mention when machining beams are that, due to the higher moisture content within the beam, you can sometimes expect a mild reaction with the oak and the steel tooling that is used to shape the timber.

This will show up as a dark blue stain across the faces. Again, this can easily be sanded off, and is widely accepted in the trade.



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We stock several standard thicknesses in a variety of lengths, mainly square sections, 150mm, 200mm, 250mm, 300mm, 350mm, and even 400mm beams, ranging from 3mtrs to 7mtrs in length.

Please be aware that naturally air-drying oak will contain splits on all surfaces.

For more information please contact Timbersource. Timbersource are a leading online hardwood timber merchant in the UK, supplying Fresh Sawn / Air dried oak timber beams to the joinery, carpentry, construction and building trade at competitive prices.

There are four good reasons why we are the preferred supplier of European Oak timber for discerning buyers.

## **Finest Quality**

European Oak, or French Oak is grown across the whole country, but we predominantly source timber from the Normandy, Burgundy and Dole regions. That's because this area of France is close to the Swiss border and the trees here tend to grow more slowly due to the relatively harsh conditions. This gives the timber a consistent golden brown colour so you'll tend to have less variation within your order.

## **keen prices**

We deal direct with sawmills in France, thereby cutting out the middleman. This keeps our prices competitive.



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## Service that makes it easy for you

We have our own mill and machine shop, so we can do all the preparatory work, saving you valuable time and effort. We can re-saw your timber to specific widths, easing handling and lessening the time spent converting. The product is straight, and consistent which makes it so much easier for planing, moulding or converting the timber.

We also offer planing, profiling and sanding timber services, saving you even more time and effort. Finally, when we receive your cutting list we calculate the final lump sum price, including any planing or sanding.

You don't have to calculate the costs yourself and means you instantly know exactly what you'll have to pay.

## Speed of delivery

We carry ample supplies in stock. Because we have our own machine shop we can prepare everything on site - you can have whatever you require without delay.

You can collect from our yard or we will deliver to any part of the country. Delivery is usually made by lorry (certain sided for kiln dried timber) or van if it's a small, urgent order. Our regular drivers have considerable timber experience and we are often complimented on their helpful attitude and careful handling of the timber.

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