

# European Oak



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

**Latin name** Quercus robur, Quercus petraea

**Also known as** European oak, English Oak, French Oak, Croatian 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.

## European 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 due to the board 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 lighter in weight. The growth conditions in the various countries which export oak, vary considerably.

The weight of oak varies according to type; that of 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 reddish-brown. 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, and commands a premium price due to scarcity.

**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



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**Working Qualities** Medium to difficult - the working and machining properties of oak vary from 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 poor quality drying 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 a greater degree of blunting of cutting edges. Cutters 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 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, expect near edges, when the wood should be pre-board, and takes liming and fuming treatments well. Use stainless or galvanised fixings etc.

**Durability** Durable

**Treatability Heartwood** Extremely difficult, Sapwood is easier

**Moisture Movement** Medium, according to moisture content

**Abrasions** Very good

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

**Texture** Medium to coarse

**Availability** Readily available

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

**Physical Properties** High strength properties. Medium bending and crushing strength.



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## Working with European Oak

**Use(s)** Heavy structural use, cladding, joinery interior and exterior, furniture, flooring, sleepers, decking, construction, doors, paneling, timber bridges, coffins and caskets, architectural joinery, mouldings, kitchen cabinets, barrel staves.

**Colour** Yellow brown

There are four good reasons why we are a 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 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.

We occasionally stock a small amount of light 'Cats Paw / Pippy' Oak in 27mm thickness. This is hedgerow-grown Oak and less intensively managed. As a result, it has a beautiful character and is suitable for a range of different furniture uses.

Quarter sawn oak planks are especially prized - they have an interesting medullary ray visible on the surface, which is aesthetically pleasing, but they are also more stable. We can exclusively select these premium boards if you require and you can even come and pick your own boards.



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Oak takes a long time to dry and is generally kiln dried in only 27mm - 80mm thicknesses. However, we do stock 100mm well air dried log sawn boards which are also usually wide and long.

## **Keen prices**

We deal with sawmills in France which keeps our prices competitive.

## **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 flat surface sanding timber services, saving you even more time and effort.

Finally, when we receive your cutting list we can calculate the final lump sum price, including any planing or moulding.

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



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## Speed of delivery

We carry ample supplies in stock, including beams. 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 (curtain sided for kiln dried timber) or van if it's 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.

Timbersource is a leading online hardwood timber merchant in the UK, supplying European Oak timber to the joinery, carpentry, construction, retail and building trade at competitive prices.



The mark of  
responsible forestry

