

## European Oak

Family Name:	Fagaceae												
Latin Name:	Quercus Robur												
Origin:	UK & Europe												
Strength Class:	D40												
Weight:	Approx 700 kg/m <sup>3</sup>												
Durability:	Heartwood is Durable												
Description:	Colour varies from tan to biscuit, usually straight grained but irregular or cross-grained material can occur. Characteristic silver grain figure on quartered surfaces. Medium to coarse texture.												
Mechanical Properties:	Very good steam bending classification. Dries very slowly with a tendency to split and check. Medium movement in service.												
Main Uses:	<table> <tr> <td>Blocks</td> <td>Sleepers</td> </tr> <tr> <td>Wedges</td> <td>Boat Building – English Oak</td> </tr> <tr> <td>Beams</td> <td>Dock &amp; Harbour – English Oak</td> </tr> <tr> <td>Bogmats</td> <td>Garden Furniture – English Oak</td> </tr> <tr> <td>Furniture</td> <td>Joinery</td> </tr> <tr> <td>Flooring</td> <td>Sleepers</td> </tr> </table>	Blocks	Sleepers	Wedges	Boat Building – English Oak	Beams	Dock & Harbour – English Oak	Bogmats	Garden Furniture – English Oak	Furniture	Joinery	Flooring	Sleepers
Blocks	Sleepers												
Wedges	Boat Building – English Oak												
Beams	Dock & Harbour – English Oak												
Bogmats	Garden Furniture – English Oak												
Furniture	Joinery												
Flooring	Sleepers												

Standard Name	Grade	Bending parallel to grain <sup>a</sup> N/mm <sup>2</sup>	Tension parallel to grain <sup>a</sup> N/mm <sup>2</sup>	Compression		Shear parallel to grain N/mm <sup>2</sup>	Modulus of elasticity		Approx Weight Kg/m <sup>3</sup>
				Parallel to grain	Perpendicular to grain <sup>b</sup>		Mean	Minimum	
				N/mm <sup>2</sup>	N/mm <sup>2</sup>		N/mm <sup>2</sup>	N/mm <sup>2</sup>	
Balau	D70	23.4	14.1	23.0	5.3	2.8	20 900	16 700	850
Beech	D30	22.8	22.8	15.2	4.5	3.1	11 400	7 200	710
Douglas Fir	C24	4.4	2.6	5.2	2.1	0.8	9 500	6 000	530
Ekki	D70	25.0	15.0	24.6	5.6	3.0	18 500	15 500	1050
Greenheart	D70	26.1	15.6	23.7	5.9	2.6	21 600	18 000	1030
Iroko	D40	12.6	7.5	12.6	2.8	1.6	10 600	8 500	660
Jarra	D40	13.8	8.2	14.2	3.1	2.0	12 400	8 700	835
Kapur	D60	18.1	10.9	18.0	4.1	1.9	19 200	15 800	770
Keruing	D50	16.2	9.7	16.0	3.6	1.7	19 300	16 100	745
Larch	C24	5.3	3.2	6.8	1.8	0.8	9 000	6 000	575
Oak	D40	20.7	20.1	15.2	4.5	3.1	9 700	5 200	700
Opepe	D50	17.0	10.2	17.6	3.8	2.1	14 500	11 300	740

<sup>a</sup> Stresses applicable to timber 300mm deep (or wide)  
<sup>b</sup> When the specifications specifically prohibit wane at bearing areas, the HS grade compression perpendicular to the grain stress may be multiplied by 1.33