



## European White Oak – *Quercus spp*

**Other Names:** French Oak, English Oak etc. (according to origin), Rovere, Quercia, Chene

**Region of Origin:** Central Europe

### SPECIES OVERVIEW:

European Oak heartwood is light tan to biscuit colour and usually straight grained but irregular or cross-grained material can occur. Characteristic silver grain figure on quartered surfaces due to broad rays.

### MAIN USES:

Furniture and cabinetmaking, interior joinery, flooring, wine barrel staves and caskets.

### WORKING PROPERTIES:

There is moderate to severe blunting on cutters. The wood takes waxing, liming, fuming and polishing treatments very well.

### MECHANICAL PROPERTIES:

Oak has a very good steam bending classification, but is liable to blue stain if in contact with iron compounds.

### AVAILABILITY:

Specifications stocked at Rosenfeld Kidson are:  
Sawn 200x25mm, ex 200x25mm T&G strip flooring.

### GRADING:

Prime (FAS), Light Feature.

DENSITY (kg/m <sup>3</sup> )*:	720
DURABILITY:	Durable

STRENGTH GROUP:	SD5
MOR (MPa):	100
MOE(GPa):	12.0
JANKA(kN):	5.9

SHRINKAGE GREEN TO 12% M.C.	Tangential	Radial
	8.0	5.0

\*Air Dry Density (kg/m<sup>3</sup>) is average indication only and actual value may vary. Refer to timber properties tables over page for strength, shrinkage and durability classifications.



**STRENGTH GROUPINGS:**

Minimum values for strength groups (unseasoned timber)			
<i>(units are Mpa = 145 lb/sq.inch)</i>			
Strength group	Modulus of rupture	Modulus of elasticity	Maximum crushing strength
S1	103	16300	52
S2	76	14200	43
S3	73	12400	36
S4	62	10700	31
S5	52	9100	26
S6	43	7900	22
S7	36	6900	18

Minimum values for strength groups (seasoned timber)			
<i>(units are Mpa = 145 lb/sq.inch)</i>			
Strength group	Modulus of rupture	Modulus of elasticity	Maximum crushing strength
SD1	150	21500	80
SD2	130	18500	70
SD3	110	16000	61
SD4	94	14000	54
SD5	78	12500	47
SD6	65	10500	41
SD7	55	9100	36
SD8	45	7900	30

**SHRINKAGE CLASSIFICATIONS:**

Description of shrinkage	Shrinkage from Green to Oven-dry (12% MC)	
	(% before reconditioning)	
	Tangential	Radial
Very low	0 - 3.5	0 - 2
Low	3.5 - 5.0	2 - 3
Medium	5.0 - 6.5	3 - 4
High	6.5 - 8.0	4 - 5
Very high	> 8.0	> 5

**DURABILITY CLASSIFICATIONS:**

Grade of durability	Approximate service life (years)		
	Fully protected	Above ground, exposed	In-ground, exposed
Very durable	>50	>40	>25
Durable	>50	15-40	15-25
Moderately durable	>50	7-15	5-15
Non-durable	>50	0-7	0-5