Rosenfeld Kidson

Species Fact Sheet

Cedar, Western Red – *Thuja plicata*

Other Names: Red Cedar
Country of Origin: Canada

SPECIES OVERVIEW:

Western red cedar heartwood shows variations in colour when fresh from dark brown to pink colour, maturing to a reddish-brown and, in time to silver-grey when weathered. The sapwood is a paler colour. Straight grained and rather coarse texture, it has a very low shrinkage factor. Also machines and stains very well. The forests of British Columbia, from where cedar is sourced, are all well-managed and certified as such. Producers carry certification under either SFI, CSA, FSC or PEFC.

MAIN USES:

Wide range of uses as exterior cladding, mouldings, panelling, roof shingles and shakes, external and internal joinery, window blinds and shutters, hot tubs and spa pools.

WORKING PROPERTIES:

Cedar produces long, lightweight lengths of timber with a fine, straight grain and uniform texture that make it easy to cut, saw and nail. It planes to a smooth surface, holds glue bonds and provides a good base for painting and staining.

MECHANICAL PROPERTIES:

Cedar has a very low shrinkage factor and is superior to all other coniferous woods in its resistance to warping, twisting and checking.

AVAILABILITY:

Specifications stocked at Rosenfeld Kidson are:
Sawn 22mm, 45mm, 50mm, 75mm, 100mm and 150mm thicknesses in varying fixed widths. Weatherboard, fascia, mouldings, TG&V panelling and D4S profiles.

GRADING:

PC1 Clears, PC2 Clears, Finger-jointed blanks, Reman (Factory).

DENSITY (kg/m3)*:	Green	Air Dry
	530	370
DURABILITY:	Durable	

SPECIFIC GRAVITY:	Standard 0.33	
STRENGTH GROUP:	SD8	
MOR (MPa):	Unseasoned	Seasoned
	37	54
MOE(GPa):	Unseasoned	Seasoned
	8	7

SHRINKAGE GREEN TO 12% M.C.	Tangential	Radial	Volumetric
	4.0	2.0	5.0

*Air Dry Density (kg/m3) is average indication only and actual value may vary. Refer to timber properties tables over page for strength, shrinkage and durability classifications.

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Timber Properties

STRENGTH GROUPINGS:

Minimum values for strength groups (unseasoned timber)			
(units are Mpa = 145 lb/sq.inch)			
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)			
(units are Mpa = 145 lb/sq.inch)			
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

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