

Technical Information > Timber Species Database

> Cedar, Western red (imported)



Thuja plicata

Also known as: Western red cedar, giant arbor vitae (USA), red cedar (Canada)

Wood type	Softwood
Environmental	Not listed in CITES. Believed available from well-managed sources. Check certification status with suppliers.
Distribution	A tree of the northern Rocky Mountains and Pacific North-west; its full range extends from Alaska southwards to California, and eastwards along many of the interior ranges of British Columbia, northern Washington, Idaho and Montana to the western slope of the continental divide.
The Tree	<p>The largest of the so-called cedars, it grows to a height of 45m to 75m with a diameter of 1m to 2.5m.</p> <p>The sapwood is narrow and white in colour, and the heartwood is reddish-brown. When freshly felled, the heartwood often displays a marked variation in colour; that from the centre of the log may be a dark chocolate-brown changing to salmon pink nearer the sapwood, or the wood may be variegated with alternate dark and light zones. After drying, the wood assumes a uniform reddish-brown tone, but after long exposure to weather the colour is lost, and the wood becomes silver-grey. This weathered appearance is sometimes purposely sought by architects, but a further peculiarity of the wood is its ability to take and hold stain of the finest tint without discolouration. The wood is non-resinous, straight-grained, somewhat coarse-textured and exhibits a fairly prominent growth-ring figure. It is soft, rather brittle, aromatic, especially when wet and light in weight, about 390 kg/m³ when dried.</p>
The Timber	
Drying	Thin sizes dry readily with little degrade, but the timber generally tends to hold its moisture at the centre and care is needed with thick stock to avoid internal honey-combing and collapse. The timber holds its position well after drying with practically no tendency to warp and check. While movement due to shrinking and swelling in changing atmospheres is small.
Strength	Its light weight and soft timber contributes to low strength properties and compared with European redwood (<i>Pinus sylvestris</i>) it is some 20 to 30 per

cent inferior in bending strength, and about 15 per cent less stiff. It is also much less resistant to splitting and indentation on side grain than redwood.

Working Qualities	Good - The timber works easily with both hand and machine tools, but its relatively brittle nature, which can cause splintering during some operations, and its soft character, which can lead to chip-bruising, usually means that care is needed in order to obtain the best results during mortising, planing and moulding. A good finish can be obtained, but cutters must be kept sharpened.
Durability	Durable
Treatability	Extremely difficult Difficult (Sapwood)
Moisture Movement	Small
Abrasions	Medium
Density (mean, Kg/m³)	390 ()
Texture	Coarse
Availability	Regular
Price	Medium
Chemical Properties	Fine dust may be irritant. An acidic timber which may corrode metals under damp conditions and cause iron staining.
Use(s)	Cladding
Colour(s)	Reddish brown (Ages to silver grey if left unprotected)