Characteristics of Common Species Utilized in Timber Framing (adapted from US Forest Products Wood As An Engineering Material)

Species	Indigenous Region:	Characteristics	Cost $ less expensive $$ average $$$ most expensive	Color of dry heartwood	Decay Resistance	Notes specific to timber framing
Bald Cypress	Southern US	Softwood; moderately heavy, strong and hard. Old growth is no longer readily available.	$$	Light yellowish to reddish brown	Old growth is resistant or very resistant; young growth is moderately resistant	
Cedar—Atlantic White	Southern US	Softwood		Light brown with reddish tinge	Resistant or very resistant	
Cedar—Northern White	Northern US	Softwood	$	Light to dark brown	Resistant or very resistant	
Port-Orford Cedar	Western US	Softwood; Fine texture, generally straight grain, and a pleasant spicy odor. Moderately lightweight, moderately strong. Moderate shrinkage with little tendency to warp.	$$$+	Light yellow to pale brown	Resistant or very resistant	Prized in Japanese timber framing
Cedar—Western Red	Western US	Softwood	$$	Reddish brown	Resistant or very resistant	
Douglas Fir	Western US	Softwood; Strong	$	Orange red to red, sometimes yellow	Moderately resistant	
Hemlock, Eastern	Northern US	Softwood; Moderately lightweight, moderately strong, moderately low in strength. Old trees tend to have considerable shake	$	Light reddish brown	Slightly or nonresistant	
Hemlock,	Western US	Softwood		Light reddish	Slightly or	

Western				brown	nonresistant	
Larch, Western	Western US	Softwood; Stiff, moderately strong, heavy & hard. Moderately high shrinkage. Usually straight grained.		Russet to reddish brown	Moderately resistant	
Locust, Black	Southern, Northern & Appalachia	Hardwood; very heavy, very hard, very strong. Moderately low shrinkage		Golden brown, sometimes with tinge of green	Resistant or very resistant	
Pine, Eastern White	Northern US	Softwood; Moderately soft and moderately low in strength, low shrinkage and ranks high in stability.	$	Cream to light reddish brown	Moderately Resistant	More rustic look; Darkens with time to a caramel color.
Pine, Lodgepole	Western US	Softwood; Generally straight-grained, moderately lightweight, moderately high shrinkage, moderately low in strength.		Light reddish brown	Slightly or nonresistant	
Pine, Ponderosa	Western US	Softwood; Moderately low in strength, moderately light, moderately low shrinkage and has little tendancy to warp and twist.		Orange to reddish brown	Slightly or nonresistant	
Pine, Red	Northern US	Softwood; Moderately heavy, moderately strong and stiff; has		Orange to reddish brown	Slightly or nonresistant	

		moderately high shrinkage.				
Pine, Southern: longleaf, loblolly, shortleaf, and slash	Southern US	Softwood; All have moderately high shrinkage. Longleaf and slash are heavy, strong, stiff and hard.	$	Orange to reddish brown	Old growth longleaf, slash, and eastern white are moderately resistant; all others are slightly or nonresistant	More than average checking and movement during drying
Oak, Red	Southern, Northern & Appalachia	Hardwood; Open pores, strong, heavy, fairly high shrinkage in drying	$$	Light brown, usually with pink or red tinge	Slightly or nonresistant	
Oak, White	Southern, Northern & Appalachia	Hardwood; Closed pores, strong, even heavier than red oak	$$	Light to dark brown, rarely with reddish tinge	Resistant or very resistant	
Redwood	Western US	Softwood	$$	Cherry red to deep reddish brown	Old growth is resistant or very resistant; young growth is moderately resistant	
Spruce: black, Engelman, red and white	Western US	Softwood; Lower in most strength values than Southern Pine, but compares favorably with Douglas fir in important bending properties	$$	Nearly white	Slightly or nonresistant	
Spruce, Sitka	Western US	Softwood		Light reddish brown	Slightly or nonresistant	