



# Ipe Decking Span Chart & Structural Reference

Contractor Quick Sheet

## Residential Deck Span Table

Board Profile	Actual Size	Max Span (Perpendicular)	Max Span (45° Diagonal)	Live Load
1x4	¾" x 3½"	16" O.C.	12" O.C.	100 lb/sf
1x6	¾" x 5½"	16" O.C.	12" O.C.	100 lb/sf
5/4x4	1" x 3½"	24" O.C.	16" O.C.	100 lb/sf
5/4x6	1" x 5½"	24" O.C.	16" O.C.	100 lb/sf
2x6	1½" x 5½"	32" O.C.	24" O.C.	100+ lb/sf

Note: Ipe is sold in nominal sizing. Actual dimensions shown above.

## Ipe Structural Properties

Property	Value	Test Standard
Janka Hardness	3,680 lbf	—
Bending Strength (MOR)	25,400 psi	ASTM-D143
Max Crushing Strength	10,350 psi	—
Shear Strength	2,060 psi	—
Specific Gravity	0.85–1.08	—
Air-Dry Density	66–75 lb/ft³	—
Fire Rating	Class A (NFPA) / Class 1 (UBC)	ASTM-E84

## Load Rating Notes

- **Residential Standard:** 100 lb/sf live load per IRC
- **Commercial/Heavy Traffic:** Use 5/4 or 2x profiles with reduced joist spacing (12"–16" O.C.)
- **Deflection:** Span ratings designed for near-zero deflection under standard loads
- **Diagonal Installation:** Reduce max span by one increment (e.g., 16" → 12")

## Ipe vs. Common Decking Materials



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Material	Janka Hardness	Bending Strength	Typical Lifespan
Ipe	3,680 lbf	25,400 psi	50–75+ years
Cedar	350 lbf	6,500 psi	15–20 years
Pressure-Treated Pine	690 lbf	9,900–14,500 psi	10–15 years
Composite	940–1,390 lbf	1,423–4,500 psi	25–30 years
Redwood	450 lbf	7,900 psi	15–25 years

## ■ Key Assumptions

1. Joists are properly secured and level
2. Standard residential foot traffic (40 lb/sf dead load + 100 lb/sf live load)
3. Air-dried lumber at ~12% moisture content
4. Adequate ventilation below deck (min. 18" clearance recommended)
5. Proper pitch for drainage (min. ¼" per 10 ft)

*Always verify with local building codes. This guide is for reference only.*