

## Hardwood Plywood Physical Properties

Properties	Domestic Fir Core	Pro-Core II	Pro-Core IV	Spectracore	MDF	PBC
Wood Species	Douglas Fir, Hemlock, Pine, White Fir, Balsam, Larch, Etc.	Douglas Fir, Hemlock, Pine, White Fir, Balsam, Larch, Etc.	Douglas Fir, Hemlock, Pine, White Fir, Balsam, Larch, Etc.	Douglas Fir, Hemlock, Pine, White Fir, Balsam, Larch, Etc.	Fir/Pine	Fir/Pine
Number Piles 3/4 " Panel Blanks or 1 Step	7 Both	7 Both	7 & 9 Both	5 Both	3 n/a	3 n/a
Formaldehyde Standard	CARB Phase 2 and TSCA Title VI Certified	CARB Phase 2 and TSCA Title VI Certified	CARB Phase 2 and TSCA Title VI Certified	CARB Phase 2 and TSCA Title VI Certified	CARB Phase 2 and TSCA Title VI Certified	CARB Phase 2 and TSCA Title VI Certified
Glue Chemistry	ULEF or NAUF	ULEF or NAUF	ULEF or NAUF	ULEF or NAUF	ULEF or NAUF	ULEF or NAUF
Formaldehyde fuming Ave. (ULEF)	Below .05ppm	Below .05ppm	Below .05ppm	Below .05ppm	Below .05ppm	Below .05ppm
Formaldehyde fuming Ave. (NAUF)	Below .03ppm (depends on wood)	Below .03ppm (depends on wood)	Below .03ppm (depends on wood)	Below .03ppm (depends on wood)	Below .03ppm (depends on wood)	Below .03ppm (depends on wood)
Environmental Certification	FSC	FSC	FSC	FSC	FSC/ECC	FSC/ECC
Oversize Availability?	Yes	Yes	Yes	Yes	Yes	Yes
HPVA Core Grade	K or L as 1-step J as Blank	J	J	J	J	J
Dimensional Stability	Good	Very Good	Excellent	Very Good	Excellent	Very Good
Density	31±5 pcf	40±5 pcf	41.5±5 pcf	41±5 pcf	46±5 pcf	42±5 pcf
MOR (perpendicular to the face)	6000+ (psi)	4900+ (psi)	3400+ (psi)	4900+ (psi)	3300+ (psi)	1300+ (psi)
MOR (parallel to the face)	5000+ (psi)	7800+ (psi)	7200+ (psi)	3100+ (psi)	6400+ (psi)	4500+ (psi)
MOE (perpendicular to the face)	900,000+ (psi)	485,000+ (psi)	499,000+ (psi)	750,000+ (psi)	405,000+ (psi)	320,000+ (psi)
MOE (parallel to the face)	700,000+ (psi)	900,000+ (psi)	1,000,000+ (psi)	575,000+ (psi)	850,000+ (psi)	630,000+ (psi)
Screw Hold (face)	350 (lbs)	345 (lbs)	360 (lbs)	305 (lbs)	240 (lbs)	240 (lbs)
Screw Hold (edge)	300 (lbs)	200 (lbs)	340 (lbs)	280 (lbs)	250 (lbs)	200 (lbs)
Tolerance (Blank)	± .015 From Target	± .015 From Target	± .015 From Target	± .015 From Target	n/a	n/a
Tolerance (One Step) HPVA	+0/-.047	+0/-.047	+0/-.047	+0/-.047	n/a	n/a
Water Absorption (% 24hrs)	n/a	16.7 (%)	18.7 (%)	22 (%)	8 (%)	13.1 (%)
Thickness Swell (% 24hrs)	n/a	4.3 (%)	5 (%)	2.5 (%)	3.2 (%)	3.9 (%)
Janka Ball Hardness (lbs)	741	779	1063	873	1044	794
Wt./M ft2 (lbs)	965	1258	1302	1258	1437	1319

Note: All physical properties change from panel to panel depending on the natural characteristics of the wood used to make the panel.