



Photo: Kristin Hansen, UCSD

Industry:	University
Project Name:	Sustainability Resource Center at the University of California, San Diego
Location:	San Diego, CA
Architect:	Jimmy Sullivan, CitizenDesign Group
Materials:	Natural Flat Grain plywood and flooring Amber Flat Grain shelving and door frames



Natural Flat Grain

Sustainability Wins

Plyboo Natural flat grain flooring and Amber flat grain amber shelves and door frames make a welcome and fitting learning environment for the Sustainability Resource Center at the University of California, San Diego.

Pictured here is a shot of one of the offices, now complete with Plyboo flat grain natural flooring and flat grain amber door frames.



Possible LEED Credits:

- IEQc4.3: Low Emitting Materials
- MRc6: Rapidly Renewable Materials
- MRc7: Certified Wood
- CA Section 01350: Passed
- Other: No added urea formaldehyde

Natural Flat Grain Plywood

Amber Flat Grain Plywood

Physical / Mechanical Properties - Edge Grain and Flat Grain Flooring	
ASTM E648: Critical Radiant Flux,	<ul style="list-style-type: none"> i. Flat Grain prefinished: Class 1 ii. Edge Grain prefinished: Class 1
ASTM D1037 Dimensional Stability, AR to 20% RH	<ul style="list-style-type: none"> • Linear Expansion: <ul style="list-style-type: none"> -Flat Grain: Parallel -0.04%, Perpendicular -0.13% -Edge Grain: Parallel -0.02%, Perpendicular -0.07% • Thickness Swell: <ul style="list-style-type: none"> -Flat Grain: -0.17% -Edge Grain: -0.34% ii. Hardness (Janka Ball Test) <ul style="list-style-type: none"> • Flat Grain Natural: 1,900 lbf (avg) • Edge Grain Natural: 1,700 lbf (avg) • Flat Grain Amber: 1,400 lbf (avg) • Edge Grain Amber: 1,300 lbf (avg)
ASTM D3501: Compressive Strength	<ul style="list-style-type: none"> • Flat Grain: 7,249 lbs / 13,522 lbs. • Edge Grain: 6,160 lbs / 12,201 lbf (avg)
ASTM D3359: Adhesion by Tape Test	<ul style="list-style-type: none"> i. Flat Grain: Class 4B ii. Edge Grain: Class 4B
ASTM D4060: Taber Abrasion	<ul style="list-style-type: none"> i. Avg. Wear-through / Wear Rate <ul style="list-style-type: none"> • Flat Grain Natural: 24,500 cycles / 5,444 cycles per 0.001 inch • Flat Grain Amber: 22,500 cycles / 5,500 cycles per 0.001 inch • Edge Grain Natural: 28,000 cycles / 10,370 cycles per 0.001 inch • Edge Grain Amber: 20,000 cycles / 6,897 cycles per 0.001 inch
ASTM: 4442: Moisture Content	<ul style="list-style-type: none"> i. Flat and Edge Grain: 6% - 9% (average range)
ASTM D5116-06: Organic Emissions [CA Section 01350]	<ul style="list-style-type: none"> i. Classroom scenario / Office scenario: <ul style="list-style-type: none"> • Flat and Edge Grain: Pass / Pass