ECO-PANELS LLC

FOR: DEMO

ALLOWABLE PANEL LOADS

12-Mar-09

WIDE (in)	48.00	**LEN (ft)**	9.00	**DPT (in)**	4.50	**LLOAD (sf)**	30	**Foam lb**	26.10
WT (lb)	134.10	**R-VALUE**	26.70	**L/240**	0.450	**DEFLECT**	0.298	**Shot**	8.70
INPUT SKIN TYPE				**L/180**	0.600	**LOAD**	1080	**#Ln.Ft.**	135

Weakest Skin (Side 1)

0 (0) 7/16 OSB, (1) 19/32 OSB, (2) 5/8 T-lll, (3) Hardy, (4) 1/2 FB, (5) 5/8 FB, (6) 24 ga Galv, (7) .032 Alum, (8) 24 ga SS, (9) .04 Alum Corr, (10) 24 ga Galv Corr, (11) 20 ga galv

Strongest Skin (Side 2)

0 (0) 7/16 OSB, (1) 19/32 OSB, (2) 5/8 T-lll, (3) Hardy, (4) 1/2 FB, (5) 5/8 FB, (6) 24 ga Galv, (7) .032 Alum, (8) 24 ga SS, (9) .04 Alum Corr, (10) 24 ga Galv Corr, (11) 20 ga galv

Core Material

0 (0) Polyurethane, (1) MEPS-Molded Polystryene, (2) EXPS-Extruded Polystryene

Side **7/16 OSB** Side 2 **7/16 OSB** Core Mat **Urethane Core**

INPUT VARIABLE DATA

t1	0.4375	Net effective thickness of weakest skin (in.)
t2	0.4375	Net effective thickness of strongest skin (in.)
E1	1500000	Modulus of elasticity of weakest skin (psi)
E2	1500000	Modulus of elasticity of strongest skin (psi)
n	1.000	Relative area factor for conversion to weakest skin material
A1	5.25	Effective area of weakest skin (in.^2/ft)
A2	5.25	Effective area of strongest skin (in.^2/ft)
h	4.5	Panel depth (in.)
c	3.625	Core Depth (in.)
E	1500000	Modulus of elasticity of converted skins (psi)
Ec	700	Modulus of elasticity of the core (perpendicular to skin) (psi)
Fc	2600	Allowable compressive stress for (weaker) skin material (psi)
Ft	3250	Allowable tensile stress for weaker skin material (psi)
Fv	26	Allowable shear stress in the core (psi)
Gc	325	Modulus of rigidity of core (shear modulus) in direct of span (psi)
L	9	Design span length (ft)
L/180	0.6000	Allowable deflection in inches
L/240	0.4500	Allowable deflection in inches
P	900	Design axial load (lb per foot of panel width)
w	30	Design uniform load (psf)

OUTPUT COMPUTED DATA

y	2.25	Distance from neutral axis to outermost fiber of strongest skin (in.)
I	43.32	Panel moment of inertia (in.^4 per foot of width)
S1	19.25	Section modulus for A1 face
S2	19.25	Section modulus for A2 face
Pcr	12299.74	Theoretical column buckling load (lb per foot of panel width)
Ccr	3494.04	Theoretical skin stress at buckling (wrinkling)
fb	204.35	Applied bending stress in the facings (psi)
fv	2.77	Applied shear stress in the core (psi)
D	0.30	Deflection due to transverse loading (in.)
Db	0.07	Deflection due to bending (in.)
Ds	0.23	Deflection due to shear (in.)