

A.8 TECHNICAL DATA

POLYSTEEL® FORM TECHNICAL DATA SHEET	
PRODUCT DESCRIPTION	
An expanded polystyrene concrete forming unit which is used to construct a solid, monolithic concrete wall with reinforced concrete post and beams. The Forms remain in place providing a super energy efficient concrete wall and are finished with conventional interior and exterior wall coverings.	
MATERIALS OF MANUFACTURE	
<ul style="list-style-type: none"> • Molded expanded polystyrene (EPS), self-extinguishing, conforming to ASTM C 578 • Galvanized steel wire, 11 gauge • Galvanized steel strip, 22-gauge 	
NOMINAL DIMENSIONS & WEIGHT	
Length	48"
Height	16"
Width	9-1/4" (6" core), 11" (8" core), 14" (10" core)
Surface Area	5.33 sq. ft.
Weight	6-8 lbs. per PolySteel Form
CONCRETE VOLUMES	
6" core	0.074 cu yd per unit (1 yd of concrete fills 13.5 Forms)
8" core	0.100 cu yd per unit (1 yd of concrete fills 10 Forms)
10" core	0.133 cu yd per unit (1 yd of concrete fills 7.5 Forms)
TYPICAL DESIGN VALUES	
Expanded Polystyrene density	1.5 lbs./cu ft
Average thickness of EPS	2.4" per side (6" core), 2.5" (8" core), 3" (10" core)
R-value of 1.5 lb./cu ft EPS	4.17/inch
U-factor of 1.5 lb./cu ft EPS	0.24/inch
Average Nominal R-value Per Form	20-25 (See Effective R-Value Section A.4)
Weight with concrete	56 lbs./sq. ft (6"), 76 lbs. (8"), 100lbs (10")
Air infiltration comparison	25% versus wood frame
Effective R-value For PolySteel Wall	R26 to R50+
Water absorption (volume)	Less than 3% (ASTM C272)
Water Vapor Permeability	1.39 perm-inch (ASTM E96)
Water Vapor Permeance	0.93 perms per 1.5" (minimum)
Sound Transmission Coefficient (STC)	48 (minimum) with 1/2" drywall
Fire Wall (ASTM-E119)	4 hours without any wall covering
EPS compressive strength	15-21 psi (10% deformation)
Concrete compressive strength	2,500 psi (typical)
Ambient temperature for concrete placement	Down to 0°F (-18° C)