

8.4 Glossary of Terms

Following are several terms used in this manual and the typical understanding of their meaning.

90° Corner Form	A section of a Fox Blocks wall system that creates a ninety degree corner
ACI	American Concrete Institute
Air Barrier System	The elements of the building envelope that provide a continuous effective barrier to the movement of air through the building envelope. This assembly of components used the building construction creates a plane of air tightness throughout the building envelope to control air leakage
Air Permeance	An insulation material that doesn't completely fill the entire cavity results in air pockets, which permits air movement within the cavity. Condensation inside walls, ceilings, floors, and attics occurs when warm, moist air is allowed to pass through or around insulation and contacts a cold surface. By minimizing air movement and introducing mechanical ventilation, your home can be healthier, quieter, and more energy efficient.
Allowable Bearing Pressure	The maximum pressure that may safely be applied to the soil or rock by the foundation.
Allowable Load	The maximum load that may be safely applied to the foundation
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
Authority Having Jurisdiction	The governmental body responsible for the enforcement of any part of the codes or regulations mentioned in this manual
Basement	The story of a building located below the first story
Bearing Surface	The contact surface between the foundation and a floor joist, beam, open web steel joist or hollow core slab.



Brick ledge Form	A section of a Fox Blocks wall system used to create a shelf to support the application of brick veneer
Buck	The frame, normally wood or vinyl, used to hold the concrete in the forms at window and door openings
Building Envelope	The external elements (walls, floor, ceiling, roof, windows and doors) of a building that enclose conditioned space; the building shell
Chalk Line	String line
CFC (Chlorofluorocarbon)	Any of various halocarbon compounds consisting of carbon, hydrogen, chlorine, and fluorine, once used widely as aerosol propellants and refrigerants. Chlorofluorocarbons are believed to cause depletion of the atmospheric ozone layer and have been phased out as part of the Clean Air Act
Consolidation	The manipulation of concrete to remove air bubbles to avoid honey-combing and voids which can allow leakage
Conventional Insulation	Fiberglass, cellulose and rockwool
Course	A horizontal row of Fox Blocks form units
Curing	Hydration; the chemical reaction that occurs as concrete loses its water
Damp proofing	A product or the application of a product designed to inhibit the passage of water
Dead Load	The weight of all permanent structural and non-structural components of a building
Dimensions	Length, width, and thickness of full size (finished product) EPS panels measured to ensure the final dimensions are within acceptable tolerances



Dimensional Stability, Thermal & Humid Aging	A measure of dimensional change in EPS after exposure to hot and cold temperatures at high relative humidity for seven days. The EPS is normally exposed to temperatures of 70° C (158° F) and 40° C (-40° F) for seven days at 97% of ambient humidity. After exposure, the dimensions of the EPS samples are measured at room temperature. The tabulated value is expressed as a percent change in dimensions before and after exposure. The smaller the percent change, the smaller the change in dimensions
EPS	Expanded Polystyrene
EPS Compressive Strength	Indication of the amount of pressure required to compress the EPS to its yield point of by 10% of its original dimension, whichever occurs first
EPS Density	A measure of the weight of EPS per unit volume
EPS Flexural Strength	Measured as the amount of pressure it takes to reach the breaking load of EPS samples in bending. Samples are supported at the ends and a concentrated load is applied at the mid-span of the samples. The load is gradually increased until the samples fail
EPS Limiting Oxygen Index	A measure of the EPS to sustain a flame. The measurement is described as the amount of oxygen required (expressed as a percentage) to just support flaming combustion on the EPS when exposed to a flowing mixture of nitrogen and oxygen. The tabulated value is the amount of oxygen in the nitrogen/oxygen mixture required to just keep the EPS aflame
EPS Water Absorption	A measure of the ability of the EPS to absorb water. The tabulated value is a ratio of the weight of water absorbed by the EPS to the weight of the EPS dry, expressed as a percentage. The smaller the value, the less water absorbed by the EPS



EPS Water Vapor Permeance	The rate at which water vapor will pass through the EPS. During the test, a vapor pressure difference between the two sides of the EPS is produced. The tabulated value is the rate at which the vapor passes through the EPS. The smaller the value, the lower the water vapor permeance of the EPS.
Exterior Cladding	Those components of a building which are exposed to the outdoor environment and are intended to provide exterior protection, i.e. from weather
Fire Endurance Test	Fire test of a wall assembly with cast-in-place concrete. Both sides of the wall have no cover or protective barrier. The wall assembly is subjected to a bearing load while exposed to fire until a certain temperature on the wall is reached. The time to reach that temperature including observations are recorded. After the fire test, the wall assembly is subjected to the impact, cooling, and erosion effects of a hose stream—the hose stream test.
Fire Resistance Rating (FRR)	The time in hours, or fraction thereof, that a material or assembly of materials will withstand the presence of flame and the transmission of heat when exposed to fire under specified conditions of test and performance criteria.
Firewall	A type of fire separation of non-combustible construction which subdivided a building or separates adjoining buildings to resist the spread of fire which has a fire resistance rating and structural stability under fire conditions.
Flammability	Fire test on the plastic polypropylene web tie to determine the burning characteristics of the plastic tie material. With the tie supported in a horizontal position, a flame is applied at one end. The flame front distance is the distance the flame travels from the applied end to the point the flame goes out. The linear burn rate is the rate it takes to travel the flame front distance.



Flame Spread and Smoke	Flame spread and smoke developed rating is determined from a fire test. Flame spread and smoke developed rating is a surface burning characteristic of a material and is not related to the fire resistance of a material. Flame spread rating is an indication of how fast fire will spread over the EPS from the original flame source. Smoke developed rating is an indication of how much smoke is generated during the fire test. The tabulated values are relative numbers based on calculations from the fire test results. The number is compared to asbestos and red oak, which have a rating of 0 to 100 respectively. Flame spread ratings provide an indication, particularly useful for fire officials, of how fast fire may spread in a building based on the building's materials. The National Fire Protection Agency (NFPA) classifies a material's suitability for use in construction based on its flame spread index
Footing	The wider portion of the foundation found at the bottom of the foundation wall, also referred to as a footer
Formaldehyde Emission	A measure of the amount of formaldehyde released from the EPS when heated to 120° F (49C)
Foundation	A system through which the loads from a building are transferred to supporting soil or rock
Fungi Resistance	A measure of the amount of fungi growth on the EPS when exposed to certain types of fungi
Grade	The average level of proposed or finished ground adjoining a building at all exterior walls
Grade Beam	A below grade wall that is reinforced such that it will perform as a beam to support the loading conditions imposed by the building
Hard Coat	A finish material normally applied to the exterior with a trowel to provide a weather resistant coating that is aesthetically pleasing
HCFC (Hydrochlorofluorocarbon)	Compounds containing carbon hydrogen chlorine and fluorine. They have shorter atmospheric lifetimes than CFCs and deliver less reactive chlorine to the stratosphere where the "ozone layer" is found



HFA Propellant	Usually hydroflouroalkane-134a, used in chlorofluorocarbon-free (CRC-free) aerosol delivery systems
HFC (Hydrofluorocarbon)	Compounds containing carbon, hydrogen, and fluorine. HFCs are a class of replacements for CFCs. Because they do not contain chlorine or bromine, they do not deplete the ozone layer. However, this class of compounds has other adverse environmental effects, which may make it necessary to regulate production and use of these compounds at some point in the future.
Heat Loss	Heat that is lost from a building through air leakage, conduction and radiation. To maintain a steady interior temperature, heat losses must be offset by a combination of heat gains and heat contributed by a heating system
HUD	US Department of Housing and Urban Development
Infiltration	Uncontrolled leakage of air into a building through cracks around doors, windows, electrical outlets and at structural joints
Lateral Fastener Resistance	Test to determine the lateral strength of Type S and Type W screws fastened to the web (tie). A concentrated load is applied perpendicular to the axis of the screw, which is fastened to the tie. The load is gradually increased and tested to failure. Deflections are recorded during the duration of the tests
Lintel	The section of wall directly over an opening designed to transfer the loads to the side of the opening
Live Load	The load other than a dead load to be assumed in the design of the structural members of a building
Load	A supported weight or mass
Load bearing	As applying to a building element means subjected to or designed to carry loads in addition to its own dead load



Moist Cure	Hydration in the presence of water
Parging	An acrylic based, cementitious coating designed for use on EPS
Party Wall	A wall jointly owned and jointly used by 2 parties under easement agreement, and erected at or upon a line separating 2 parcels of land
Pile	A slender deep foundation made of materials such as wood, steel, concrete or a combination thereof
Plastic Shear Strength	Test to determine the shear strength of the polypropylene web (tie)
Point Load	A load that is concentrated over a small area
Pour Rate	The speed at which concrete can be placed into a wall given a certain temperature
R-Value	The resistance to heat flow. The higher the R-Value, the more effective the insulation. Contrary to popular belief, all insulation material of equal R-Value will not perform equally in your walls and ceilings. While insulations of equal R-Value perform the same in the controlled conditions of a laboratory, they do not all maintain the same R-Value in the walls and ceilings of a building. Some off-gas over time, diminishing in thickness and efficiency. If there are gaps between the insulation and other building materials (as is often the case with batts), the effective R-Value of the insulation can be reduced by as much as 50 percent from the maximum R-Value rated on a product
Regulation	The governmental rules governing the design or use of a material or its installation
RO	Rough Opening, see RSO
Rock	That portion of the earth's crust which is consolidated, coherent and relatively hard



RSO	Rough Stud Opening; dimension supplied by the window/door manufacturer referencing the outside dimensions of the unit.
Scaffold Bracket	The shelf angle designed to support the scaffold planks
Shrinkage	The dimensional change of concrete due to hydration
Smoke Density Rating	A measure of the relative amount of smoke produced by the burning of the polypropylene web. The tabulated value is the amount of loss of light transmission through the smoke produced from the burning of the web, expressed as a percentage
Soil	That portion of the earth's crust which is fragmentary, or such that some individual particles of a dried sample may be readily separated by agitation in water
Sound Transmission Class (STC)	The classification rating of the quantity of airborne sound which is inhibited from traveling through a material or assembly
Standard	The minimum quality to which a material must be manufactured
Standard Room Fire Test	Fire test of a room assembly where one corner of the room is built with ICF blocks with cast-in-place concrete and covered with 1/2" drywall. The room is exposed to a column of fire originating in the corner of the room adjacent to the ICF. The ICF is exposed to the fire for 115 minutes and observations recorded. The tabulated value is based on observations that showed melting of the EPS did not extend outside of the column of fire, smoke generated was not excessive, and since there was no damage to the concrete, the structural integrity of the wall remained in place.
Straight Form	A straight section of a Fox Blocks wall system
Step Footing	A footing that incorporates multiple elevations in order to compensate for sloping site conditions



Stirrup	A section of reinforcing steel bent and shaped to strengthen a section of concrete wall
Taper Top Form	A section of a Fox Blocks wall system which is similar to the straight form used to create a wider bearing surface at the top of the wall
Tee-Wall	The intersection between two walls that are perpendicular to each other
Thermal Bridge	An area through which heat energy can be transmitted through a wall assembly
Thermal Resistance	A measure of a material's resistance to heat flow through the EPS. The higher the R-Value, the greater the resistance to heat flow, the better the insulator
Tie	The black plastic strap which functions as a form tie and furring strip; also known as web
UL	Underwriters Laboratories
Vapor Barrier System	The element of the building envelope that is installed to control the diffusion of water vapor through the building envelope
Vapor Permeance (Perm Rating)	Vapor permeance measures the rate at which the insulation material diffuses moisture. The lower the perm rating, the better. Ideally, insulation should allow low rates of moisture diffusion to occur, just enough to let adjacent building materials breathe in order to prevent moisture entrapment. Icynene® insulates and air-seals to significantly reduce heat and moisture flow through the building envelope. This is an important factor in combating condensation and mold growth within the walls and ceilings
Waterproofing	The application of a product designed to prohibit the passage of water through its surface



Web

The black plastic strap which functions as a form tie and furring strip; also know as tie

Withdrawal Fastener Resistance

Test to determine the withdrawal strength (or pullout strength) to Type S and Type W screws fastened to the web (tie). A concentrated load was applied parallel to the axis of the screw, which is fastened to the tie. The load is gradually increased and tested to failure.

