

A.7 THE “FEEL” OF POLYSTEEL

Many of our customers have asked us to explain the reasons for the unusually high level of comfort they have experienced in homes and offices built of our PolySteel Forms. These people tell us that this feeling and comfort level cannot be duplicated in buildings constructed of conventional materials. We believe that there are several factors that contribute to this special feeling.

First, and foremost, is the overall effect of massive concrete walls encapsulated within high density expanded polystyrene insulation. The human body is a heat generating machine which continuously gives off heat. The ASHRAE Handbook (American Society of Heating, Refrigerating, and Air Conditioning Engineers) states that, even when people are sedentary and inactive, they give off about 340 BTU's of heat per hour. Although the air absorbs a small amount of this body heat, the majority of the heat radiates outward until a solid mass is encountered. If the amount of mass is small, such as a wood frame wall, the heat rapidly moves through to the other side. If the wall is insulated, the heat moves through more slowly. If the mass is large and cold, such as in a cold, uninsulated concrete wall, the body heat will be immediately absorbed. By allowing this radiant heat to escape through the structure, all of these wall types will have the effect of “drawing” heat away from your body, making you feel chilly and uncomfortable. In a PolySteel wall, the body heat loss is offset by the heat being emitted by the warm, massive, insulated concrete wall. This balance creates a stabilizing effect on the interior environment, leaving you with an unequaled sense of comfort and well being.

The second factor related to comfort is the temperature difference between the floor and ceiling. The ASHRAE Handbook points out that a person may feel thermally neutral for the body as a whole, but might not be comfortable if one part of the body is warm and another cold. In buildings constructed of conventional materials, the temperature difference between the floor and ceiling will range from 5 to 10 degrees Fahrenheit. By comparison, the temperature difference from floor to ceiling in a PolySteel building is typically less than 2 degrees.

A reduction in reactions to respiratory allergies is the third comfort factor in a PolySteel structure. The effects of hay fever, asthma, and other airborne allergies can be greatly alleviated as a direct result of the reduced leakage of outside air, which brings dust, pollens and other pollutants. Tests have shown that the infiltration and leakage into a PolySteel building is 75% less than that found in structures built with conventional walls. In fact, the reduced air leakage of a PolySteel home or office, used in conjunction with properly installed fresh air exchangers and electrostatic air filters, can result in the best possible living environment available for respiratory allergy sufferers.

The fourth element contributing to the unequaled comfort of a PolySteel home is quietness. The combination of massive concrete encapsulated within high density expanded polystyrene provides a superior barrier to the sounds and noises of the outside environment. This creates a cocoon of peacefulness in which to live and work while keeping outside noises outside.

A.7 THE “FEEL” OF POLYSTEEL (continued)

Other factors which contribute to the high degree of comfort within PolySteel walls are; the elimination of air drafts, so common in wood or steel frame houses; the feeling of physical security resulting from being surrounded by impenetrable steel-reinforced concrete walls, and, finally, the peace of mind that comes from knowing that you are living or working in the most energy efficient and environmentally favorable home or office available. All of these elements combine to create a unique sense of comfort and well being in a PolySteel building that is unlike any other feeling you will experience in a man-made structure. That's why we call it the “feel” of PolySteel.



“It is hard to describe in words, but there is a feeling of coziness, peacefulness and a serene feeling we have with living in this home.”

Rue Johnson
Osceola, Nebraska

“When our family is in our new PolySteel Home we feel safe. Safe from storms, earthquakes, all dangers. To be surrounded by 10-inch thick exterior walls gives you a feeling of security. To build a home of this construction gives new meaning to the phrase, “your home is your castle,” because just as in centuries gone by when castles were built and can still be seen, I am positive that this home will be standing for many, many years to come. This is our contribution to posterity.”

The Ebacher family
Camus, Washington