



# Air Infiltration

## Air Infiltration Report

Air infiltration – it is a problem in most every building. Not only is it costly, but for the people who live or work in a drafty environment it can be uncomfortable as well.

It is easy to understand air infiltration. In the summer, heat may enter a building through small cracks around windows, doors and other openings. Of course, air conditioned air escapes from these same cracks. In the winter, this problem is compounded by something known as “chimney” or “stack” effect. Essentially, hot air rises and escapes through the openings near the top of the structure while cold air is drawn in through cracks or openings near the bottom of the building. The chimney effect can cause air movement as high as 10 m.p.h.

Every cubic foot of infiltrated air will be heated or cooled at your expense. Over the course of a year, the additional energy costs really add up. But, it is not necessary to settle for a drafty environment.

**SEALEZE®** Brush Weatherseals are the most effective weathersealing solution. Brushes prevent 98.5% of air infiltration and are three times more effective than vinyl. Brush Weatherseals are durable and almost never need to be replaced. **SEALEZE®** brushes generally last the life of the door.

### Brush is Most Effective

**SEALEZE®** Brush Weatherseals allow significantly less air leakage than vinyl seals. what does that mean? For a 10’ x 10’ sectional door, over a six-month heating season, Brush Weatherseal will keep out an additional five million cubic feet of air – that is five million cubic feet of air you will not be heating! and with high wind on large doors such as airport hangars, **SEALEZE®** Brush Weatherseal is the only weatherseal that works at all.

### Brush Has a Short Payback Period

No discussion of energy savings would be complete without mentioning the payback from your investment. **SEALEZE®** Brush Weatherseal generally pays for itself in savings in about one year! And considering it has a life expectancy of at least 10 years, brush offers a considerable return over its lifetime. Exact payback calculations are dependent on a number of variables unique to each situation. However, a study by the U.S. Navy on energy conservation in aircraft hangars found nylon brush seals to be the superior weatherseal material.

This chart shows the relative amounts of air leakage among three different sealing scenarios. The test was conducted on a 10’ x 10’ residential garage door. Flow rates are measured in cubic feet per minute per square foot of door opening (cfm/ft<sup>2</sup>).

### Sealing Scenarios

Simulated Wind Speed	No Weatherseal	Vinyl Seal on Top & Sides	SEALEZE® Weatherseal Brush on Top & Sides
15 mph	6.24 cfm/ft <sup>2</sup>	0.30 cfm/ft <sup>2</sup>	<b>0.10 cfm/ft<sup>2</sup></b>
25 mph	See note	0.64 cfm/ft <sup>2</sup>	<b>0.21 cfm/ft<sup>2</sup></b>
15 mph	See note	See note	<b>0.63 cfm/ft<sup>2</sup></b>

Note: Infiltration rate exceeded capacity of measuring equipment.