



Differences between Open-cell and Closed-cell Spray Foams

When trying to figure out whether to use open-cell or closed-cell spray foam, there are two major factors at play. The first one being the style of foam. It is either open-cell foam, where there are small cells that are not totally filled in; the fact that they are broken allows air to fill the spaces in the material. This makes the foam more pliable and softer feeling.

Closed-cell foams differs in that all of its tiny foam cells are closed and packed together. Rather than being filled with air, the spaces in closed-cell foam are filled with gases that help it to rise and become a better insulator.

Density is measured by weighing one solid cubic foot of foam material. Open-cell foams typically weigh in at 0.4 to 0.5 lb./cu. ft. Closed cell foam for insulation applications range in density from 1.7 lb./cu. ft. to 2.0 lb./cu. ft. Roofing applications typically use a 2.8 to 3.0+ lb./cu. ft. to support traffic and loads better. The higher the density the foam, the heavier, or stronger it becomes

The advantages of closed-cell foam when being compared to open-cell foam include its strength, higher R-value, and its greater resistance to the leakage of air or water vapor. The disadvantage of the closed-cell foam is that it is denser, requires more material, and therefore, is more expensive. Even with a better R-value, typically the cost per R for closed-cell is still higher than open-cell foam. The choice of foam can also be based on the requirements for the other performance or application specific characteristics such as strength, vapor control, available space, etc.

Both types of foam are commonly used in most building applications and the choice for which to use can depend on many of the factors discussed above. So if you are trying to figure out the proper foam for your application, just give us a call and we would be happy to point you in the right direction. With over 30 years of spray foam insulation experience, you can trust our knowledge and expertise with both open-cell and closed-cell foams.