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½ lb. Foam (LaPolla®) (Spray-applied and Fill-applied)



The most well known type of “attic foam” is LaPolla® foam. LaPolla® is an open-celled ½ pound density foam. At Green Star Foam, we have historically sprayed numerous types of ½ pound foam. In doing so, we found LaPolla® to be the absolute best on the market. So, we have switched to spraying only LaPolla(R) ½ lb. foam. ½ lb. foam expands rapidly up to 150 times its initial volume and is dry to the touch within seconds.

Spray applied LaPolla® ½ lb. foam expands rapidly up to 150 times its initial volume. It has an R-Value of 3.6 and uses water as a blowing agent, yet is dry to the touch within seconds. Of all foams available for insulation, ½ lb. is usually the most economical choice when the goal of maximum R-value is not limited by space or moisture issues.



There are two types of LaPolla® ½ lb. foam: spray-applied and fill-applied.

Spray-applied LaPolla® has an R-Value of 3.9 per inch of thickness. In other words, a 6-inch application of LaPolla® will provide a 21.6 R-value. Because LaPolla fills all cracks and crevices, it prevents air seepage in even the smallest areas. So, the effect of LaPolla® insulation is even greater than its stated R-value.

Fill-applied LaPolla® (also known as “pour fill”) has an R-Value of 4.0 per inch of thickness. The pour fill is an insulation and air barrier that injects the latest building technology into an older building to maximize energy efficiency

while still preserving its original architectural details. Fill-applied LaPolla® fills the wall cavity completely, starting at the bottom and slowly expanding upwards to 60 times its initial volume. Since LaPolla expands in the direction of least resistance, it will not expand outward and damage the wall.

1 lb. Foam (Apex Platinum Series 1.0)



More recently, we have begun spraying a 1 lb. density foam. This foam is still technically labeled open cell foam, but it is truly a mix between the standard open-cell ½ lb. foam and the 2 lb. closed cell foam. For it to be closed cell foam, the closed cell content would have to be at least 95% by volume.

The 1lb. foam is unique in that it has a delivered R-Value of at least 5. This means that one could spray 1 lb. foam in a 2 x 4 wall and achieve almost R-19 (5 x 4 =20) at a cost comparable to achieving R-19 with ½ lb. foam. It could be sprayed in a 2x6 constructions and still leave room for electricians to later fish wires through the walls. Or, one could make 2x6 walls almost an R-30.

2 lb. foam (numerous suppliers)



Closed Cell foam of a 2 lb density is unique both in its water resistant capacity and as a structural material. This means that as well as being an insulator and an air barrier, it is also a vapor barrier and a structural bracing material. Open celled foam (as mentioned above in the discussion on LaPolla® and the Apex Platinum Series 1.0) is an air barrier and an insulator, but has none of these other properties.

Closed Cell foam is also known as wall foam by many manufacturers. This is because, before the advent of

the 1 lb foam, 2 lb foam was the only option in a 2 x 4 stud wall to achieve to Building Code accepted R-Values. 2 lb. foam made by different manufactures has a delivered R- Value of a range 6–7.5. In certain climates, it is still the only option that the doesn't require a vapor barrier. 2 lb. foam is truly a magnificent material. We have used it to support floor joists and stop squeaking building members. We have also used it quite successfully in basements to prevent high humidity from the foundation and in attics when closing up ridge and soffit vents. If it weren't for the cost, 2 lb foam would be the perfect solution to many building problems. However, 2 lb. foam is generally twice the cost per delivered R-Value as ½ foam, so most people use it only when the additional attributes of 2 lb. are necessary.



Roofing Foam



When spray foam is used for roofing, a 3 lb. density closed cell foam is used. After the application of 3 lb. foam, a polyurea membrane is applied for protection. If you would like more info on this product, we'll be happy to provide it. Different manufacturers' foam vary widely so it is important to choose the proper foam for your particular project. We will gladly help you with this choice.

