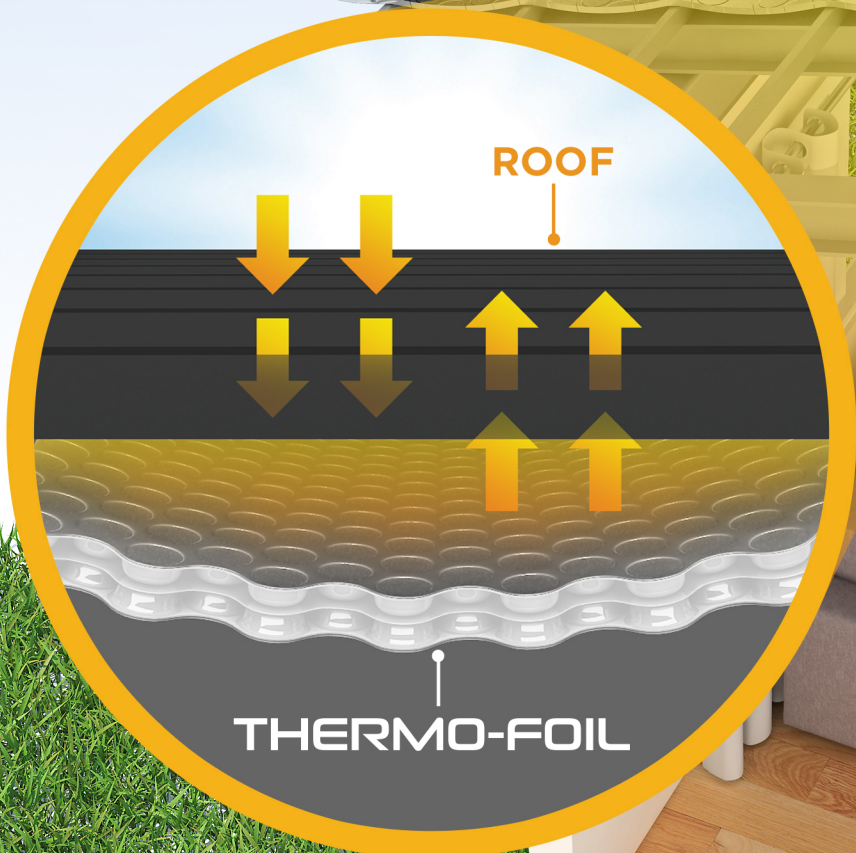
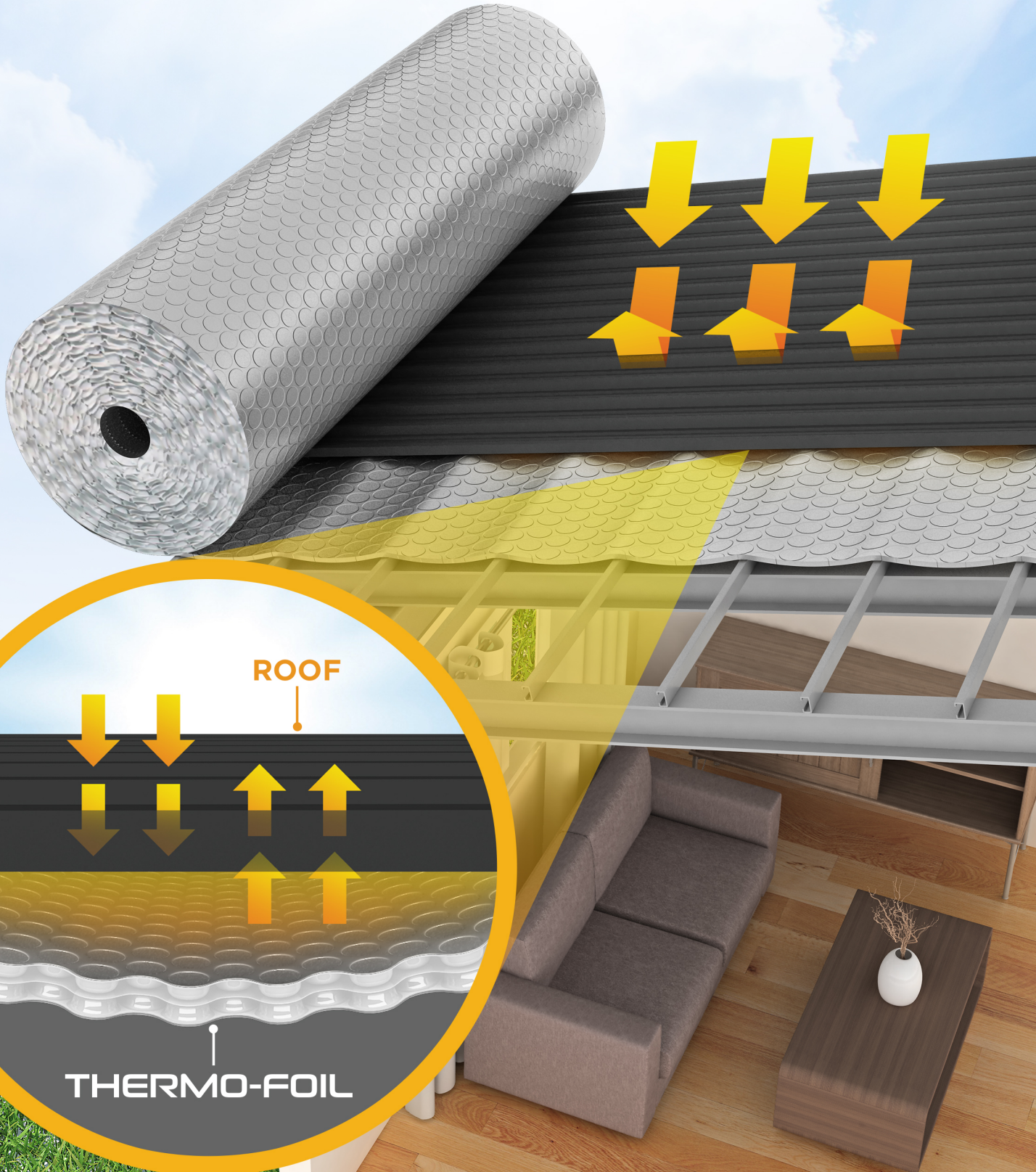




THERMO-FOIL[®]

REFLECTIVE BARRIER



OVERVIEW

REFLECTIVE INSULATION

To understand the principles of reflective insulation, we need to understand well how heat is transferred and the basic mode of energy transmission.

BASIC MODES OF HEAT TRANSMISSION

A. RADIATION radiant heat is energy. This energy flows constantly, in all directions, and affects different materials to varying degrees.

B. CONDUCTION is the direct flow of heat by way of literal physical contact. In other words when something hot touches something else, heat is transferred by conduction.

C. CONVECTION is heat transfer cause by the movement of hot air. Most of us know that hot air rises and cool air sinks.

Modern construction these days demands high performance insulation systems that have the capability to prevent heat loss by conduction, convection and radiation. The systems must also stop air infiltration and be 100% vapor barrier.

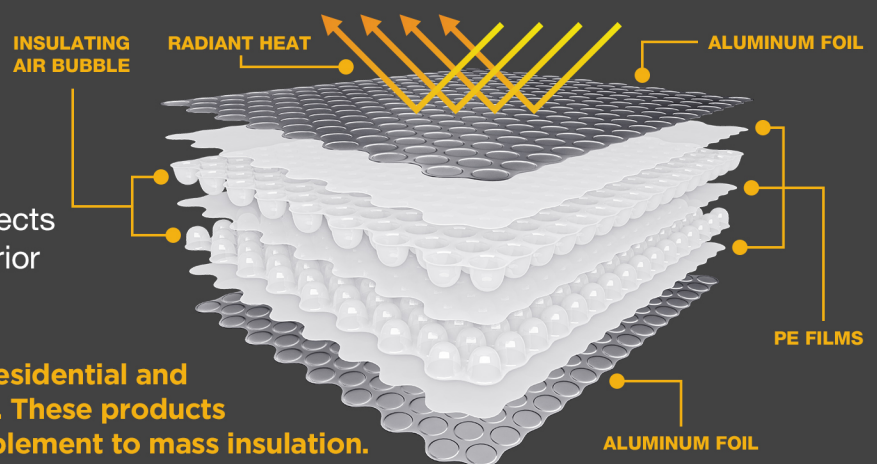


How is it possible to create a thin insulation that would meet the criteria?

The principle is simple:

1. Air that does not move is one of the best insulations against heat by convection.
2. Reflecting colors act like a mirror and reflects exterior energy toward the exterior and interior energy toward the interior.

Reflective insulation has been used in both residential and commercial applications for over forty years. These products provide a proven, reliable alternative or supplement to mass insulation.



The reflectivity being function of the surface finish, it is obtained from a thin sheet of 99% pure aluminum.

Also, the aluminum is so thin that it does not retain the energy in its mass. The ability of the foil to reflect the energy and not conduct its mass allows the people to quickly feel comfortable inside their homes. This will also allow to bring back the temperature to a comfortable degree much faster when thermostats are lowered at night. Another way to save energy.

APPLICATION

Highly recommended for use on foods processing plants, hospitals, clean rooms, agricultural buildings and open areas such as sports facilities.



HOSPITAL



SCHOOL



HOUSE



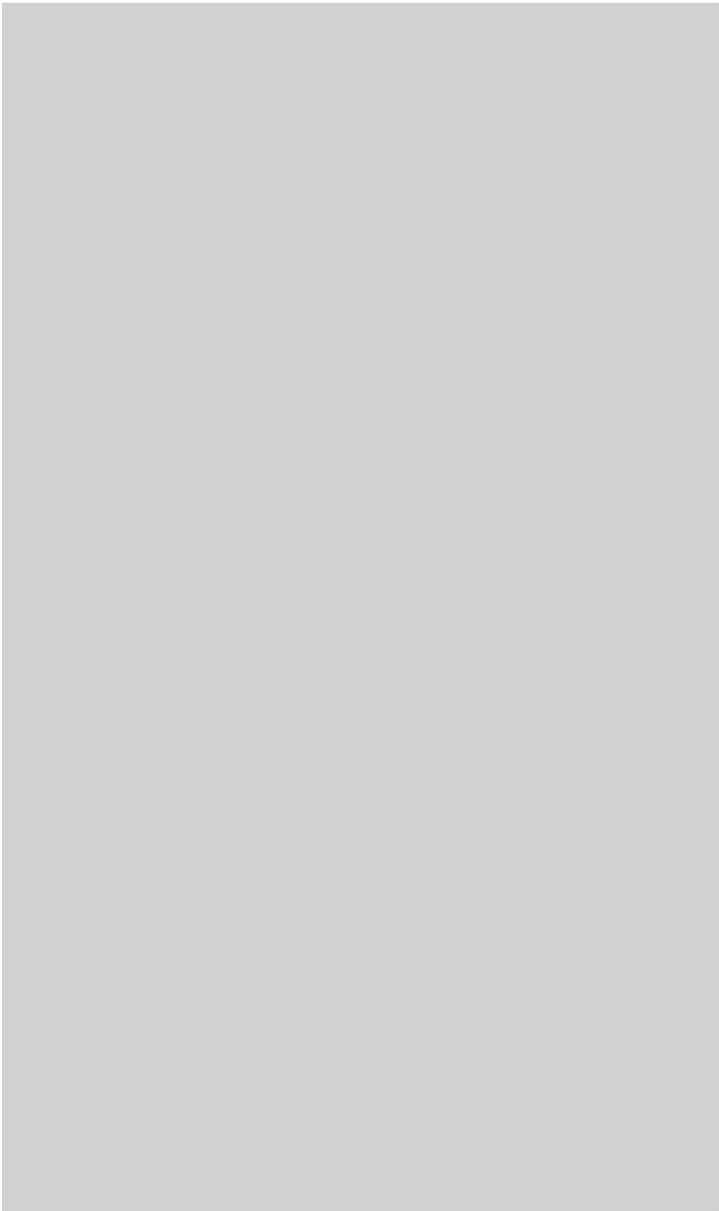
BUILDING



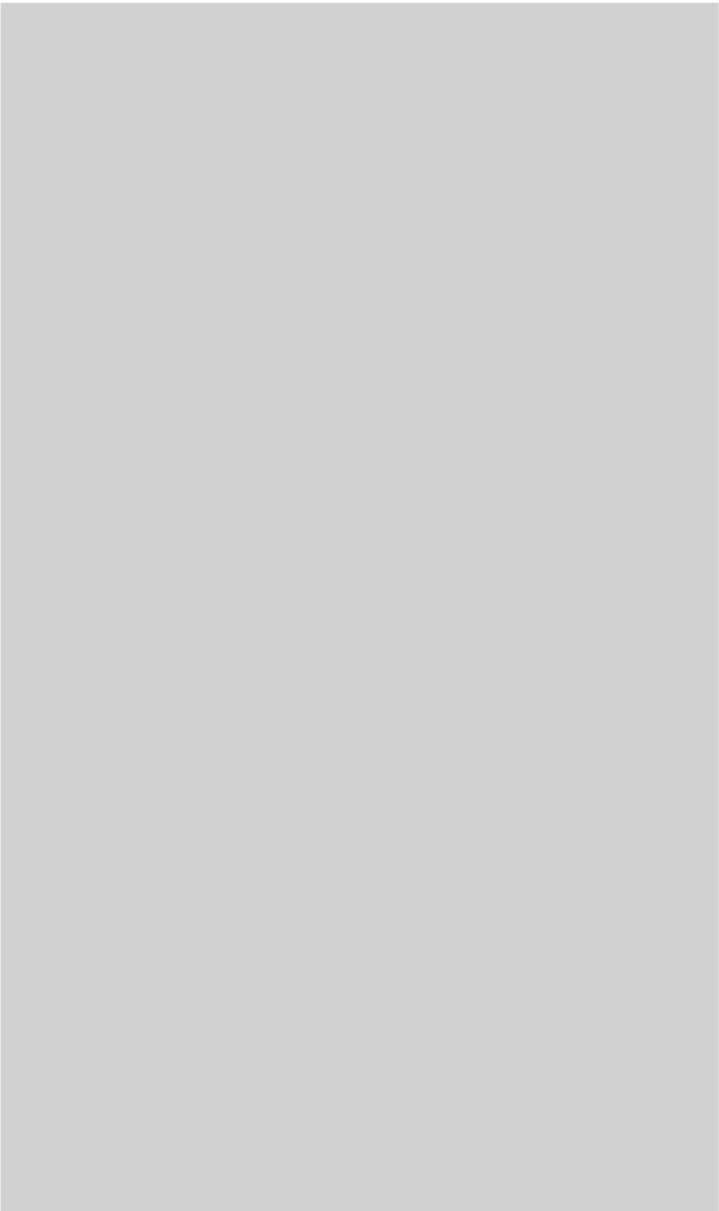
GYMNASIUM

ACTUAL PRODUCTS

Single Bubble Double Foil



Double Bubble Double Foil



INSTALLATION GUIDELINES

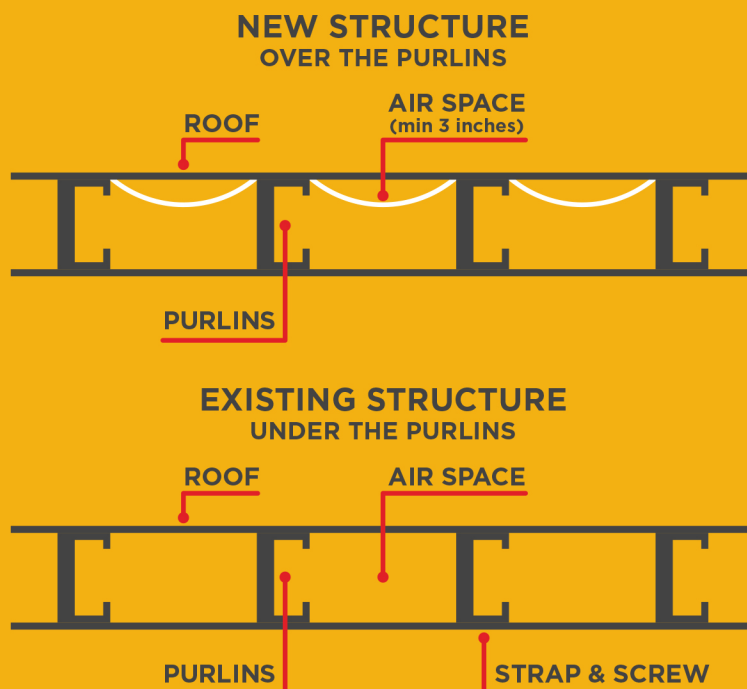
FOR NEW STRUCTURE

Allow the BUBBLE REFLECTIVE INSULATION to sag for a minimum of 3" to obtain adequate air space.

Provide the necessary ventilation to maximize Bubble Reflective Insulation effectiveness.

FOR EXISTING STRUCTURE

Have the roof checked for any leaks prior installation.



PRODUCT SPECIFICATION

R-VALUES

For Bubble Type and Methods of Installation

	Heat Flow Down		Heat Flow Up		Heat Flow Horizontal	
	Double	Single	Double	Single	Double	Single
Draped over Purlins with 1" airspace Reflective/Reflective Reflective/Poly	R-10	R-10	R-4.1	R-4.0	R-5.5	R-5.0
	R-6.5	R-6.0	R-3.4	R-3.2	R-4.1	R-3.9
Attached to the bottom of a 6" or 8" Purlin Reflective/Reflective Reflective/Poly	R-16	R-16	R-4.7	R-4.2	R-5.4	R-4.9
	R-12	R-12	R-4.0	R-3.5	R-4.4	R-3.9

R-values include lower air film. Testing and calculations in accordance with ASTM C 236, ASTM STP 1116, and ASHREA Book of Fundamentals and National Bureau of Standards.



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