



Technical Information Bulletin

## CONDENSATION FACT SHEET

### What is condensation?

Condensation occurs when warm moist air comes in contact with a surface, which is at a lower temperature.

Warm air can “hold” more moisture than cold air. When warm moist air comes into contact with a cold surface, the warm moist air can no longer retain its moisture. Small water droplets will begin forming on the cold surface.

### Controlling condensation

Two things must be present for condensation to occur; warm moist air and cold surface temperatures below the dew point. The proper control of these two factors can minimize condensation.

- **Before Building Assembly**
  - Provide a well drained base course such as crushed rock or gravel to help prevent moisture from permeating into the building through the base.
  - Provide for adequate ground water drainage away from the building’s base.
  - Divert rain and melting water accumulations away from the building’s base.
  - Install a continuous unbroken plastic vapor barrier between exposed ground surface and the building’s base.
  
- **After Building Assembly**
  - Move storage items away from walls to allow air to flow easily around the walls.
  - Create air passages around and between storage items for better air movement.
  - Divert standing water away from the base of the building.

Insulating your building can help!

See next page for installation guidelines

***Controlling condensation can be tricky---never eliminated just managed.***

# Foam Insulation Placement

## Recommended Materials

### POLYSTYRENE FOAM INSULATION

1/2" (12.7 mm) thick; R-value 3

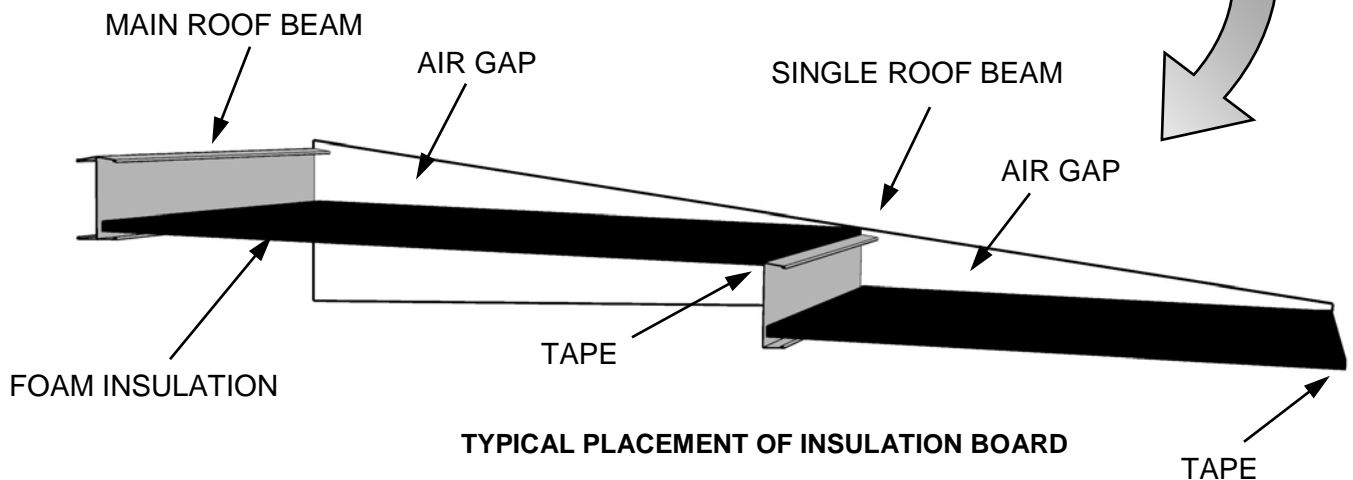
Closed-cell foam

### ALUMINUM TAPE

2 mil aluminum foil with 1 mil permanent pressure sensitive rubber base

● Shown is the typical placement of the foam insulation board. Allow for air gap between roof panels and foam insulation.

● Use aluminum tape to secure foam insulation.



**IMPORTANT:** Condensation forms on the inside surface of the metal roof panels when the warm moist air rises up from the ground and comes in contact with the cold roof panels. The insulation board is installed to provide a buffer zone to allow for a gradual temperature change to occur thus minimizing the formation of condensation.