

07 21 00 – Thermal Insulation

1. General

- A. No other component of a building has a greater influence on the life-cycle costs or greater effect on other building components. Thus, careful thought must be given to thermal insulation, insulation type and location.
1. “R” factors and “U” factors shall be determined by the Consultant in accordance with code. Do not simply specify that roof insulation must meet a certain “R” or “U” factor for the roof structure. The Consultant should decide on the insulation best suited to the project, make the calculation and specify the thickness required.
 2. Insulation shall have a maximum 6 inch thickness in a roofing design. Insulation thickness must be coordinated in the overall design of the roofing system in order to comply with the minimum 8 inch clear flashing height above the finished roof surface.
 3. Density of insulation must be sufficient to allow foot traffic or other traffic on the roof. Resistance to water, both liquid and vapor shall be specified. Insulation for reuse in reroofing shall be selected and installed.
 4. Roof insulation shall be specified by type and manufacturer. Specify minimum density or compressive strength. Roof insulation shall be specified so as to obtain a total system warranty from the roofing manufacturer.
 5. Application criteria shall be specified. Insulation shall be two or more layers, with joints staggered. A fully adhered securement method is preferred. Mechanical attachment is prohibited except on a steel metal deck. In such a case, the first layer shall be mechanically attached and fully adhered to the next. Exceptions to this requirement may be granted by the Owner on a case-by-case basis. Phenolic materials are prohibited.