

Question 14

Q: How is thermal conduction modeled for sheet bodies, or multilayer thermal conductive sheets, in the thermal analysis?

A: Multiple sheet bodies defined on the surface of a solid body can function as multilayer thermal conductive sheets.

A multilayer thermal conductive sheet model can be analyzed in the in-plane direction the same way as a multilayer solid model.

By using multilayer sheet bodies, the sheet model can reduce the number of elements and yield the same result with less calculation load.

It is noted that the thermal conduction in the depth direction for the layer structure is not taken into account and the thermal resistance in the depth direction is assumed to be zero. If significant gradients in temperature occur due to the thermal conduction in the depth direction, the multilayer sheet bodies are not applicable. In such an event, use solid bodies.

When Mesher G1 is used, the multilayer sheet bodies must be in the same form. When Mesher G2 is used, this limitation does not apply.