







VUMATHT

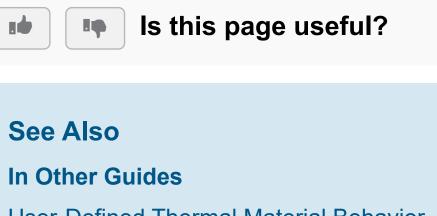
Warning: The use of this user subroutine generally requires considerable expertise. You are cautioned that the implementation of any realistic constitutive model requires extensive development and testing. Initial testing on a single-element model with prescribed traction loading is strongly recommended.

User subroutine **VUMATHT**:

- can be used to define the thermal constitutive behavior of a material as well as internal heat generation during heat transfer processes;
- will be called for blocks of material calculation points for which the thermal material behavior is defined in a user subroutine;
- can use and update solution-dependent state variables;
- can use any field variables that are passed in;
- can be used with thermally coupled continuum elements and Eulerian elements; and
- is described further in <u>User-Defined Thermal Material Behavior</u>.

This page discusses:

- <u>User Subroutine Interface</u>
- Variables to Be Defined
- Variables That Can Be Updated
- Variables Passed in for Information
- Example: Using More than One User-Defined Material Model
- Example: A Simple Thermal Material



User-Defined Thermal Material Behavior

*USER MATERIAL

Freezing of a square solid: the twodimensional Stefan problem

VUMATHT