

UHARD

User subroutine [UHARD](#):

- is called at all material calculation points of elements for which the material definition includes user-defined isotropic hardening or cyclic hardening for metal plasticity;
- can be used to define a material's isotropic yield behavior;
- can be used to define the size of the yield surface in a combined hardening model;
- can include material behavior dependent on field variables or state variables; and
- requires, when appropriate, that the values of the derivatives of the yield stress (or yield surface size in combined hardening models) be defined with respect to the strain, strain rate, and temperature.

This page discusses:

- [User Subroutine Interface](#)
- [Variables to Be Defined](#)
- [Variables Passed in for Information](#)

 **Is this page useful?**

See Also

In Other Guides

[Classical Metal Plasticity](#)

[Models for Metals Subjected to Cyclic Loading](#)

[*CYCLIC HARDENING](#)

[*PLASTIC](#)

[UHARD](#)

Products: [Abaqus/Standard](#)

User Subroutine Interface

```
SUBROUTINE  UHARD (SYIELD, HARD, EQPLAS, EQPLASRT, TIME, DTIME, TEMP,
1      DTEMP, NOEL, NPT, LAYER, KSPT, KSTEP, KINC, CMNAME, NSTATV,
2      STATEV, NUMFIELDV, PREDEF, DPRED, NUMPROPS, PROPS)
```

C