

Thermal diffusivity

[@wikipedia](#)

A diffusion coefficient of the heat transfer in a given medium:

(1)
$$a = \frac{\lambda}{\rho c_p}$$

where

λ	Thermal Conductivity of the medium
c_p	Isobaric specific heat capacity of the medium
ρ	density of the of the medium

Symbol	Dimension	SI units	Oil metric units	Oil field units
a	$L^2 T^{-1}$	m^2/s	m^2/s	

See also

[Physics](#) / [Thermodynamics](#) / [Heat Transfer](#)

[[Basic Petroleum Rock and Fluid Properties Handbook](#)]