Dimensionless Heat Transfer Numbers

The table below shows the list of the popular dimensionless numbers related to heat transfer.

Nusselt Number	$\mathrm{Nu} = \frac{U \cdot L}{\lambda}$	characterizes heat exchange rate with fluid convection
Biot Number	$\mathrm{Bi} = \frac{U \cdot L}{\lambda}$	characterizes heat exchange rate with solid bodies
Prandtl number	$\mathrm{Pr} = \frac{\nu}{a}$	characterizes fluid in terms of its ability to develop heat convection against heat conduction
Grashof number	$\mathrm{Gr} = \frac{g\,\beta\,\Delta T\,L^3}{\nu^2}$	characterizes the natural heat convection due to gravity
Rayleigh number	$\mathrm{Ra} = \mathrm{Gr} \cdot \mathrm{Pr}$	characterizes the natural heat convection due to gravity
Fourier number	$\mathrm{Fo} = \frac{a \cdot t}{L^2}$	dimensionless time

See also

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[Nusselt Number (Nu)][Prandtl number (Pr)] [Fourier number (Fo)]