

Equation of State = EOS

[@wikipedia](#)

A [thermodynamic equation](#) relating [state variables](#) in [thermodynamic equilibrium](#) which describe the [state of matter](#) under a given set of physical conditions, such as [pressure](#) p , [density](#) ρ (or [compressibility factor](#) Z), [temperature](#) T or [internal energy](#) U and chemical structure.

The most general form is:

(1) $f(p,T,V_m) = 0$

where

T	temperature
p	pressure
V_m	molar volume

Alternative forms

(2) $\rho = \rho(p,T)$	(3) $Z = Z(p,T)$	(4) $p = p(\rho,T)$
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See also

[Natural Science](#) / [Physics](#) / [Thermodynamics](#)

[[State of matter](#)] [[PVT](#)]

[[Ideal Gas EOS @model](#)] [[Real Gas EOS @model](#)][[Petroleum Fluid EOS @model](#)]