

Dual-component power law permeability @model

$$(1) \quad k = k_1 \phi^{m_1} + k_2 \phi^{m_2}$$

where

ϕ	effective porosity
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This is a complex empirical model which does not directly rely on the [Flow Zone Indicator](#).

Usually, the first component $k_1 \phi^{m_1}$ dictates [permeability](#) values at low [porosities](#) while second component $k_2 \phi^{m_2}$ takes over at high [porosities](#).

This allows to cover a wider range of [porosity](#) variations comparing to single-component [power law permeability @model](#).

This model was thought to be empirical for a very long time but later on it was shown that it has a physical meaning within the frame of [fluid percolation](#) through a [porous medium](#) with [fractal](#) structure.

See also

[Petroleum Industry / Upstream / Subsurface E&P Disciplines / Petrophysics / Absolute permeability / Absolute permeability @model](#)