

Gas solubility

Synonym: [Solution Gas Oil Ratio](#) = [Solution GOR](#) = [Gas Solubility](#) = R_s

The quantitative measure of [solution gas](#) in [live oil](#):

$$R_s = \frac{V_{Go}^\circ}{V_{Oo}^\circ} = \frac{m_{Go}}{m_{Oo}} \cdot \frac{\rho_O^\circ}{\rho_G^\circ}$$

where

$V_{Oo}^\circ = \frac{m_{Oo}}{\rho_O^\circ}$	STP volume of dead oil component of mass m_{Oo} and STP density ρ_O°
$V_{Go}^\circ = \frac{m_{Go}}{\rho_G^\circ}$	STP volume of natural gas component of mass m_{Go} and STP density ρ_G°

$R_s(p, T)$ is a [cross-phase exchange coefficient](#) and a function of [pressure](#) and [temperature](#)

See Also

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Fluid \(PVT\) Analysis](#)

[[Cross-phase fluid exchange](#) / [Cross-phase exchange coefficient](#)]

[[Vaporized Oil Ratio \(Rv\)](#)]