Lee-Gonzalez-Eakin (1966) gas viscosity correlation @model = LGE

Explicit natural gas viscosity correlation:

(1) $\mu_g = K \cdot \exp\left(X \rho_g^Y\right)$		
(2) $K = T^{1.5} \cdot \frac{9.379 + 0.01607\, MW_g}{209.2 + 19.26\, MW_g + T}$	(3) $X = 3.488 + \frac{986.4}{T} + 0.01009\, MW_g$	(4) $Y = 2.447 - 0.2224\, X$

where

μ_g	cp	Dynamic gas viscosity
T	° Rankine	Natural Gas Temperature
ρ_g	g/cc	Natural gas density
MW_g	g/mol	Natural gas molecular weight

The model range and statistical metrics:

Application range		
	Temperature	100 °F ÷ 340 °F
	Pressure	100 psi ÷ 8,000 psi
Accuracy		
	AAPE	2.7%

See also

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Fluid (PVT) Analysis / Fluid (PVT) modelling / Dynamic fluid viscosity / Dynamic fluid viscosity @model

Natural Science / Physics /Thermodynamics / Natural gas viscosity correlations

Reference

Lee, A. L., Gonzalez, M. H., & Eakin, B. E. (1966). The Viscosity of Natural Gases. Journal of Petroleum Technology, 18(08), 997–1000. doi:10.2118/1340-PA (https://doi.org/10.2118/1340-PA)