

Specific gravity

@wikipedia

Synonym: Relative Density = Specific gravity

Dimensionless ratio of the actual **fluid density** ρ to the **fluid density** of a reference substance ρ_{ref} , both taken at reference conditions (equal or close to **STP**, which should be specified individually):

$$(1) \quad SG = \frac{\rho}{\rho_{\text{ref}}}$$

The selection of reference substance and the corresponding value of ρ_{ref} depends on the context.

For fluids which are liquid at **STP** this is usually a distilled water and for fluids which are gaseous at **STP** this is usually a dry air:

Liquid specific gravity γ_L	Gas specific gravity γ_g
$\rho_{\text{ref}} = \rho_{\text{H}_2\text{O}}$	$\rho_{\text{ref}} = \rho_{\text{air}}$
$\gamma_L = \frac{\rho_L}{\rho_{\text{H}_2\text{O}}}$	$\gamma_g = \frac{\rho_g}{\rho_{\text{air}}}$

See also

[Natural Science / Physics / Fluid density](#)

[[API gravity](#)][[Oil specific gravity \(o\)](#)][[Gas specific gravity \(\$\gamma_g\$ \)](#)][[Liquid specific gravity \(\$\gamma_L\$ \)](#)]