

Wettability

[@wikipedia](#)

The tendency of the rocks solid material to imbibe one fluid (known as "wetting phase") in the presence of another fluid (known as "non-wetting phase").

The usual classification is:

	Typical values of RPM properties			
	s_{wc}	$s_w^* @ k_{rwo} = k_{row}$	$k_{rwo} @ \max s_w = 1 - s_{or}$	
Oil wet	$s_{wc} < 0.1 - 0.15$	$s_w^* < 0.5$	$k_{rwo} \sim 0.5$	Oil is wetting phase and slow while water is agile
Water wet	$s_{wc} > 0.2 - 0.25$	$s_w^* > 0.5$	$k_{rwo} < 0.3$	Water is wetting phase and slow while oil is agile
Mixed wettability	$0.1 < s_{wc} < 0.25$	$s_w^* \sim 0.5$	$0.3 < k_{rwo} < 0.5$	Oil and water have similar agility

See also

[Physics](#) / [Fluid Dynamics](#) / [Percolation](#)

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Petrophysics](#)

[[Permeability](#)] [[Relative permeability](#)]

Reference

[1] [Fundamentals of Wettability - Oilfield Review - 2007](#)