

Oil (chemical substance)

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A fluid mixture of mid-density and/or high-density alkanes that stays mostly liquid or semi-solid at Normal Surface Conditions (NTP).

The usual composition ranges from C₁ to C₃₂ and API gravity is between 4° and 42° (Specific Gravity is 0.816 ÷ 1.0).).

It may also include minor organic and inorganic chemical substances (usually < 7% in weight).

The total range of oil densities is often classified into the following sub-ranges (see also Fig 1):

Extra Heavy Oil (Bitumen)	Heavy Oil	Medium Oil	Light Oil
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Fig. 1 – A range of different gravity oil compositions from heavy (with dark brown colour at the left side of a bar) to the light (with yellow colour at the right side of a bar).
(the picture is taken from Dubost et al (2007) in SPE-108494)

In case oil does not contain dissolved gas it is called Dead Oil otherwise it is called Live Oil.

The heavier oils are usually met in Black Oil Reservoirs and lighter oils are in Volatile Oil Reservoirs.

See also

Natural Science / Physics / Chemistry / Chemical Substance

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Petroleum Geology / Petroleum fluids

[Dead Oil] [Live Oil]