Ministry of Higher Education and Scientific Research Al-Mustaqbal University College

Department of Chemical Engineering and petroleum Industrials

Properties of crude oil

2nd Stage

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Kerosene and Aviation Fuels

Kerosene is a combustible hydrocarbon liquid which is also referred as paraffin in UK.

It is a thin, clear liquid with a density of 0.78–0.81 g/cm^3, and its clean burning characteristics allow it maintain a high heat output.

Kerosene obtained from the fractional distillation of petroleum between 130 °C and 250 °C. This hydrocarbon mixture contains carbon chain between 8 and 18 carbon atoms.

Major constituents of Kerosene include n-dodecane $C_{12}H_{26}$, alkyl benzenes, and naphthalene $C_{10}H_8$ and its derivatives.

While Kerosene fuel is widely used for powering jet-engine aircraft, it is also has many domestic uses. It can be used as an efficient and economical alternative for heating or lighting a home or business.

It can be used to operate portable stoves for camping trips. It can also be used as a heat source during power outages.

Additionally, it can be used as a cleaning solvent, a lubricant, and a pesticide. Indeed, Kerosene is a versatile liquid that can be used for multiple functions.

Jet fuel is basically kerosene. There are several branded jet fuel formulas, but most of them contain chemicals intended to help jet engines burn the fuel more cleanly and more efficiently, and to help extending engine life as well.

In fact, kerosene and jet fuel are nearly identical in every way except for a few additives in modern jet fuel.