

Physical Properties of Gasoline

Property	Typical Value / Description
State	Liquid
Color	Clear to pale yellow
Odor	Sharp, characteristic petroleum-like smell
Boiling Point	30°C to 210°C (varies with composition)
Density (at 15°C)	0.71–0.77 g/cm ³
Viscosity (at 40°C)	0.5 – 0.8 mm ² /s
Flash Point	-40°C to -45°C (extremely flammable)
Autoignition Temperature	Around 280°C to 470°C
Vapor Pressure (at 37.8°C)	38–60 kPa (high volatility)
Solubility in Water	Slightly soluble
Octane Rating	87–98 RON (Research Octane Number)

Chemical Properties of Gasoline

Characteristic	Description
Chemical Composition	Complex mixture of hydrocarbons (C ₄ –C ₁₂), including alkanes, cycloalkanes, and aromatic hydrocarbons like benzene, toluene, xylene
Combustibility	Highly flammable; vapors form explosive mixtures with air
Reactivity	Stable under normal conditions; reacts with strong oxidizers
pH	Not applicable (non-aqueous, neutral liquid)
Carbon Content	Approximately 85–87%
Hydrogen Content	Approximately 12–15%
Sulfur Content	Varies; regulated to low levels (<10 ppm in many countries)