

# GASOLINE - REFINED FROM CRUDE OIL

GAS

CARBON CHAIN

METHANE



PROPANE



HEPTANE



OCTANE



COMPRESSIBILITY

HEAT UP

GOOD (BLEND) LEAD

COST \$

TEND TO 'KNOCK' AUTO-IGNITE

RATIO

7:1 87 OCTANE FUEL = 87% OCTANE 13% HEPTANE

8:1 92 OCTANE FUEL = 92% OCTANE 8% HEPTANE

10:1 95 OCTANE FUEL = 95% OCTANE 5% HEPTANE

TETRAMETHYL



1923

+



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1974-1996



FUEL

+



ETHANOL  
10%

=



DILUTE