

# SHELL AVGAS 100LL

## PISTON ENGINE AIRCRAFT FUEL

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### DESCRIPTION

Shell Avgas 100 LL is a gasoline fuel for reciprocating piston engined aircraft. Avgas 100LL has lean mixture octane rating of better than 100 whilst its rich mixture octane rating exceeds 130. The combustion performance is equivalent to Avgas 100/130. Avgas 100 LL with lead content of less than 0.56 gm/ litre means that Shell Avgas is suitable for aircraft original certified to operate on Avgas 80/87.

Shell Avgas is produced to stringent manufacturing specifications. At various stages from refinery manufacture to the final delivery to the the aircraft fuel tank, the fuel quality is checked to ensure that fuel is clean, dry and free from contamination.

Shell Avgas 100LL meets British Military Standard DEF STAN 91-90: 1996 and US Civil specification ASTM D910: 1995.

### SUMMARY OF BENEFITS

- Shell Avgas 100LL is approved by Continental and Lycoming for use in aircraft engines original rated to run on Avgas 80/87.
- The lower lead level of Shell Avgas 100LL can significantly improve overhaul life in certain engines by reducing valve and cylinder head deposits and well as reduce spark plug fouling. Initial flight trials using Avgas 100LL resulted in 25% reduction in combustion chamber deposits and spark plug deposits by approximately 35%.
- Shell Avgas 100LL with higher density than other Avgas 100/130 grades on the market has a greater energy content per litre of fuel giving rise to better fuel economy under certain operating conditions.
- Shell Avgas 100LL with lower lead means a cleaner environment with less atmospheric lead emitted in engine exhaust gases.
- Shell Avgas 100LL is dyed Blue for ease of identification.
- Shell Avgas 100LL contains an antioxidant giving good oxidation stability and protection against formation of gums and residues in fuel system components.

### HEALTH & SAFETY

Shell Avgas 100LL is a highly flammable liquid. Classified as a Dangerous Goods Class 3 PG I for transportation purposes. Avgas contains tetraethyl lead, avoid contact with the skin and eyes, and breathing vapours or mist. For further guidance on Product Health & Safety refer to the appropriate Shell Material Safety Data Sheet.

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### SPECIFICATIONS/APPROVALS

<b>US</b>	<b>ASTM - 910</b>
<b>(British)</b>	<b>DEF STAN 91-90</b>
<b>NATO</b>	<b>F-18</b>
<b>Joint Service Designation</b>	<b>F-18</b>

### TYPICAL CHARACTERISTICS

DESCRIPTION	UNITS	METHODS	TYPICAL
APPEARANCE	VISUAL	-	Clear & Bright
DENSITY @ 15°C	kg/L	-	0.718
COLOUR	-	-	Blue
KNOCK RATING LEAN MIXTURE	PN	-	131
RICH MIXTURE	PN	-	101
TETRAETHYL LEAD	g Pb /L	-	0.55
SPECIFIC ENERGY	MJ/kg	-	44
REID VAPOUR PRESSURE	kPA	-	44

### Document Information

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