Technical Data Sheet

AeroShell Oil *Diesel Ultra*

AeroShell Oil Diesel Ultra is a fully synthetic, multigrade engine oil designed for use in the new generation of compression ignition (Diesel) Aviation Piston Engines.
The formulation has been selected to be suitable in piston engines fuelled by Jet A or Jet A-1 and is designed for use in the latest highly rated turbocharged diesel engines under all operating conditions.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

AeroShell Oil Diesel Ultra is unique in being the only fully synthetic engine oil available in General Aviation. It also contains unique Shell approved additives to provide superior piston cleanliness resulting in a clean, efficient and reliable engine. These additives also include a powerful surface acting additive, which bonds to the surface of highly loaded engine parts, protecting the engine from scuffing damage.

The oil has been developed with particular reference to excellent component wear protection and engine cleanliness, based on flight experience with diesel aero engines in the field over recent years and substantial engine and component endurance tests with all major Diesel aero engine manufacturers.

AeroShell Oil Diesel Ultra key performance features include the ability to sustain high bearing loads, neutralisation of acid build up from the Sulphur present in the fuel and high dispersancy to allow for the relatively high particle loading produced when burning Jet fuel.

Main Applications

AeroShell Oil Diesel Ultra has been developed to be suitable for use in engines burning Jet fuel and its performance has been optimised to cope with the demands of this unique type of engine/fuel combination.

AeroShell Oil Diesel Ultra MUST NOT be used in spark ignition or Avgas powered aircraft engines.

Specifications, Approvals & Recommendations

AeroShell Oil Diesel Ultra is Approved to Mercedes Benz Specification 229.5, recognised and required by the leading Diesel aero engine manufacturers.

AeroShell Oil Diesel Ultra is approved for use in the following engines. Whilst this is correct at the time of writing, testing is ongoing to extend this approval listing as new engines are produced.

- Thielert/Centurion Engines: 1.7 & 2.0 Centurion (Other models yet to be produced)
- SMA: SR305-230E
- Austro Engine : AE300
- Mercedes Benz: MB 229.5
- ACEA: Meets the requirements of A3/B4
- API: Meets the requirements of SL/CF
- SAE: Viscosity grade 5W-30

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Help Desk.

Typical Physical Characteristics

Properties			Method	AeroShell Oil Diesel Ultra
Kinematic Viscosity	@40°C	cSt	ASTM D445	68.2
Kinematic Viscosity	@100°C	cSt	ASTM D445	12.2
Density	@15°C	kg/L	ASTM D4052	0.84
Flash Point Cleveland Open Cup		°C	ASTM D92	215
Pour Point		°C	ASTM D97	-39
HTHS Viscosity	@150°C	mPaS	ASTM D4683	3.50

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health and Safety**

  AeroShell Oil Diesel Ultra is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from www.epc.shell.com

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

  Advice on applications not covered here may be obtained from your Shell or Shell Lubricants representatives or technical help desks.