



Formerly Known As: PANOLIN HLP Synth ECO

Shell PANOLIN S3 HLP Synth 46

- Longer Life
- Readily Biodegradable

Hydraulic fluid - readily biodegradable, synthetic ester blend

Shell PANOLIN S3 HLP SYNTH is a readily biodegradable hydraulic fluid formulated with zinc-free additive technology and blended with fully synthetic saturated and unsaturated esters to provide an good blend of lubrication performance.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Longer oil life**

Shell PANOLIN S3 HLP Synth has a longer oil life and is designed to help equipment operate without interruptions. Longer oil-drain intervals mean less oil being produced, purchased and disposed of. High VI provides performance across a wide temperature operating window.

- **Good wear protection**

Shell PANOLIN S3 HLP Synth is designed to help equipment operate without interruptions. Shell PANOLIN S3 HLP Synth offers good wear protection of hydraulic equipment.

- **Designed to protect even in cold climates**

In addition to protecting the machine over a wide temperature operating range, shear-stable, high viscosity index fluids enable increased hydraulic efficiency in comparison to typical HM mineral oil.

- **Readily Biodegradable**

Readily biodegradable, biodegraded by over 60% after 28 days in the OECD 301 B carbon dioxide evolution test.

Main Applications



Specifications, Approvals & Recommendations

- Biodegradable OECD 301B >60%

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

Compatibility & Miscibility

- It is strongly recommended that an oil sample is taken from the system following changeover and analysed via the Shell LubeAnalyst service to confirm the new fluid charge is fit for use.
- This lubricant should not be mixed with other biodegradable hydraulic fluids to ensure that the environmental properties and performance of fluid is maintained. The system should be drained and flushed thoroughly when changing fluids, guidelines on fluid change-over can be found in ISO15380 Annex A.
- This lubricant is compatible with fluoroelastomers (FPM/FKM) such as Viton. Other seal materials and system components such as paints may be adversely affected and advice should be sought from the respective manufacturers.

Typical Physical Characteristics

Properties			Method	Shell PANOLIN S3 HLP Synth 46
Kinematic Viscosity	@40°C	mm ² /s	ASTM D445	43.7
Pour Point		°C	ASTM D97	-54
Flash Point		°C	ASTM D92	247
Density	@15°C	kg/m ³	ASTM D4052	910

These characteristics are typical of production, variations in these characteristics may occur.

Health, Safety & Environment

• Health and Safety

This product 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 Safety Data Sheet, which can be obtained from <http://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 Representative.

• Additional Technical Advice

The information and guidance offered for use of Shell PANOLIN products is based on experience and understanding gained through the development and manufacturing of lubricants. The performance of the products can be influenced by a number of variables, not limited to, contamination, operating temperature, equipment application, external environment and material type. It is recommended that you discuss application and fluid recommendations with both your OEM and local Shell technical representative before the product is used. Advice given is non binding and Shell will not be held liable for any consequence as a result of or through misuse of the fluid.