Technical Data Sheet

Formerly Known As: **PANOLIN SPRINT**

Shell **PANOLIN** *S3 HLP Synth EAL 46*

- EU Ecolabel Certified
- US EPA VGP compliant
- ISO 15380:2023
- Biodegradability Profile: See Specifications and Approvals

Environmentally Acceptable Synthetic Ester (HEES) Hydraulic Fluid

Shell PANOLIN is our range of high-performance lubricants and greases tested for high biodegradability and lower environmental impact in aquatic environments. Shell PANOLIN S3 HLP SYNTH EAL is zinc-free additive technology, blended with fully synthetic saturated and unsaturated esters provides a good blend of lubrication performance and environmental acceptability. Biodegradable as per the requirements of EU Ecolabel. Designed for applications requiring EU Ecolabel or US EPA VGP-compliant environmentally acceptable lubricants.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Good wear protection**

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

- **Maintaining system efficiency**

  High VI provides performance across a wide temperature operating window.

- **Lower Environmental Impact**

  An ‘Environmentally Acceptable Lubricant’ as defined by the United States Environmental Protection Agency’s (EPA) 2013 Vessel General Permit (VGP)

  Offers reduced impact of leaks or accidental spillage into aquatic and marine environments compared to conventional mineral hydraulic oils thanks to their higher biodegradability. (Publication EPA 800-R-11-002).

Biodegradability profile:

Biodegradable as per the requirements of EU Ecolabel (EEL).

At least 97% by mass of this lubricant's components are readily biodegradable, achieving a passing result of ≥60% according to OECD 301B.

Meets the requirements of EN 17181:2019, a modified OECD 301B-based test method for determining the aerobic biodegradation of fully formulated lubricants.

Low ecotoxicity:

Classified as 'not harmful' to algae, freshwater invertebrates and fish meeting the requirements of EU Ecolabel (EEL) for acute toxicity tests.

Classified 'not harmful' to bacteria when tested according to OECD test guidelines 209 meeting the requirements of ISO 15380 > 100mg/L.

Designed for applications requiring EU Ecolabel or US EPA VGP-compliant environmentally acceptable lubricants.

Main Applications



Specifications, Approvals & Recommendations

- EU Ecolabel Certified NL/027/028
- Meets requirements of US EPA 2013 VGP
- Meets USDA Bio-preferred programme
- Biodegradable as per the requirements of EU Ecolabel
- Meets requirements of EN 17181:2019
- Meets requirements of EN 16807-2016 >25% bio-based

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 Rapid Lubricants Analysis service to confirm the new fluid charge is fit for use.
- This lubricant should not be mixed with other HEES, HEPG, HETG and HEPR (ISO 15380: EAHF Base Fluid Classes) 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 ISO 15380 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 EAL 46
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	45.9
Pour Point		°C	ASTM D97	-36
Flash Point		°C	ASTM D92	274
Density	@15°C	Kg/m^3	ASTM D4052	920

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 https://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.