



Formerly Known As: PANOLIN BIOTRACK E

# Shell PANOLIN S4 Wire Rope EAL 320

- Extended Life
- USA EPA VGP compliant
- Readily Biodegradable

*Cable/ chain Lubricant - readily biodegradable, synthetic esters*

Shell PANOLIN S4 Wire Rope EAL 320 is a fully synthetic, readily biodegradable wire lubricant based on renewable ester. Designed to provide longer service life by protecting metal components. For use in cable and chain applications including drive and conveyor chains in environmentally sensitive areas, railway switch-point bolts, closures and hydraulic rock breakers.

## High-Performance Biodegradable Lubricants

### Performance, Features & Benefits

- **Longer service life**

Good wear performance helps protect the machine and metal components.

- **Renewable base fluids**

This product is formulated with 70% renewable base fluids.

- **Lower Environmental Impact**

Recommended for use in environmentally sensitive areas: An 'environmentally acceptable lubricant' as defined by the USA EPA 2013 Vessel General Permit and offers reduced impact of leak or accidental spillage into the environment when used in marine environments compared to conventional mineral oils. Readily biodegradable - biodegraded by over 60% after 28 days in the OECD 301 B carbon dioxide evolution test. Low Ecotoxicity - Classified as 'not harmful' to bacteria, algae, freshwater and marine invertebrates, and fish when tested as water-accommodated fractions (WAFs) according to OECD and EPA test guidelines.

### Main Applications



### Specifications, Approvals & Recommendations

- Biodegradable OECD 301B >60%

- Meets the requirements of ASTM D2596

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.

- **Fluid Compatibility**

Shell PANOLIN Fluids are miscible with mineral oils. However, in order to ensure that the environmental properties and performance of Shell PANOLIN Fluids are maintained, the system should be drained and flushed thoroughly when changing fluids.

### Typical Physical Characteristics

Properties			Method	Shell PANOLIN S4 Wire Rope EAL 320
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	320
Pour Point		°C	ASTM D97	-36
Flash Point		°C minimum	ASTM D92	256
Density	@15°C	kg/m <sup>3</sup>	ASTM D4052	958

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.