



Formerly Known As: PANOLIN BIOGREASE W EP 1

Shell PANOLIN S5 Grease EAL A600P 1

- EU Ecolabel Certified
- Anhydrous Calcium
- USA EPA VGP compliant
- Readily Biodegradable

EP universal grease - readily biodegradable, synthetic esters

Shell PANOLIN S5 Grease EAL A600P 1 is a high performance readily biodegradable grease particularly suited for use in environmentally sensitive areas where eco-label compliance is required including exposed applications including wire-ropes and open gears in marine and hydropower industry, wicket gates controlling flow of water to turbines, dams, and pipelines. This product is based upon an anhydrous calcium soap thickener. Shell PANOLIN S5 Grease EAL A600P 1 is designed to offer excellent resistance to water washout, good load carrying capacity and anti-corrosion properties.

High-Performance Biodegradable Lubricants

Performance, Features & Benefits

• Wear Protection

Good load carrying and anti-corrosion properties provide protection over a wide range of temperatures and conditions and ensure long component life.

• Maintaining system efficiency

Shell PANOLIN S5 Grease EAL A600P 1 has excellent resistance to water washout. Excess water can be easily drained from lubrication systems; which helps to extend the life of equipment and ensures efficient lubrication of contact areas.

• Wide temperature range

Shell PANOLIN S5 Grease EAL A600P 1 has excellent low temperature characteristics with good temperature range, operating temp -50 degC to +120 degC (maximum 130degC)

• 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

- Meets the requirements of EU Ecolabel - (SE/027/012)
- Swedish Standard SS 15 54 70
- Meets requirement of United States Environmental Protection Agency's (EPA) 2013 vessel general permit (VGP)
- Biodegradable OECD 301B >60%

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

Typical Physical Characteristics

Properties	Method	Shell PANOLIN S5 Grease EAL A600P 1
Thickener type		Anhydrous Calcium
Base Oil (type)		Ester
Appearance	Visual	Smooth
Colour	Visual	Yellow
NLGI Consistency		1
Dropping Point	°C minimum	ASTM D2265 140
Kinematic Viscosity	@40°C mm ² /s	ASTM D7042 560
Kinematic Viscosity	@100°C mm ² /s	ASTM D7042 58
Penetration worked	25°C/60 strokes 0.1mm	ASTM D217 310 - 340
Four Ball Extreme Pressure Test, Weld Load	N	ASTM D2596 3 400
Four Ball Wear Test	40kg; 1h; 75°C; 1200rpm mm scar maximum	ASTM D2266 0.6
Water Resistance	3 hours @ 90°C	DIN 51807 0
Water Washout Test % loss	@79°C maximum	ASTM D1264 5
Test EMCOR salt water	rating	IP 220 2-2
Low Temperature Flow Pressure	mbar	DIN 51805 1 400
Biodegradability	% minimum	CEC L-33-A-93 60
Lubricating Ability SKF R2F B	@120°C	Pass
Lower and Upper Application Temperature	°C	-50 - 120

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.