Technical Data Sheet

Shell **Spirax** *S6 CXME 5W-30*

- *Long Oil Life*
- *Excellent Performance in All Temperatures (Multi-Season)*

Premium Performance Off-Highway synthetic blend transmission oil

Shell Spirax S6 CXME 5W-30 oil is designed to provide operators with trouble free operation and maximum reliability for the lifetime of the equipment. Spirax S6 CXME 5W-30 meets the demanding requirements of modern transmission, differential gears, final drive, oil immersed brake, reduction gears and hydraulic systems fitted to heavy-duty off-highway in all climates.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long oil life with excellent oxidation stability**

  Premium synthetic base oil provides extra-long life and the formulation contains inhibitors to reduce oxidation and deposit formation. Tested in the field with excellent long oil life. Protects both ferrous and non-ferrous metals from corrosion. Suppresses foaming, with improved flow properties at low temperatures, which enhances circulation and responsiveness.

- **Excellent performance in all temperatures conditions (Multi-seasons)**

  The synthetic blend 5W-30 is formulated to meet low temperature viscosity and fluidity requirements, providing excellent responsiveness of hydraulic components during start-up and low operating temperature conditions as well as provide excellent protection at high operating temperatures.

- **Outstanding Frictional performance and material compatibility**

  Highly consistent and durable friction performance when used with the advanced metallic and non-metallic materials found in modern systems. Minimal clutch slippage, smooth and quiet brake operation and trouble-free transmission operation.

- **Excellent Anti-wear protection and optimum mechanical performance**

  The shear-stable synthetic blend SAE 5W-30 viscosity grades utilizes minimal viscosity index (VI) improvers and thickeners and give the best protection of heavily loaded components. Wide-ranging protection for critical components, such as bronze friction discs in powershift transmissions, gears and bearings in final drives, differential units and reduction gears.

- **Vickers 35V25 hydraulic pump test**

  Excellent performance in this demanding test.

Main Applications

Shell Spirax S6 CXME 5W-30 oil is recommended for use in heavy duty off-highway equipment produced by the world's leading manufactures including but not limited to Caterpillar and Komatsu. It can also be used in equipment manufactured by Eaton, ZF, Dana, Rockwell amongst others in:

- Powershift transmissions and drop boxes;
- Final drives, transfer boxes, differential gears and reduction gears; for heavily loaded application, ISO viscosity grade 50 or 60 should be used;
- Oil immersed brakes;
- Hydraulic systems and hydrostatic drives.

Also suitable for Construction/ Agricultural applications:

- General Agri CVT Transmissions
- Powershift transmissions and drop boxes
- Transfer box, differentials, final drive; for heavily loaded application, ISO viscosity grade 50 or 60 should be used;
- Critical hydrostatic drives
- HVT and other power split CVTs

Specifications, Approvals & Recommendations

- Caterpillar TO-4
- ZF TE-ML 03C
- Suitable for use in applications where Allison C-4 type fluids are required.

- Shell Spirax S6 CXME 5W-30 oil is suitable for use in many powershift or manual transmissions, wet brake systems and some hydraulic systems including Komatsu.

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

Typical Physical Characteristics

Properties			Method	Shell Spirax S6 CXME
SAE Viscosity Grade			SAE J-300	5W-30
Kinematic Viscosity	@40°C	mm^2/s	ISO 3104	59
Kinematic Viscosity	@100°C	mm^2/s	ISO 3104	11
Shear Stability (Kinematic Viscosity after 100 hrs KRL)	@100°C	mm^2/s	CEC L-45	9.8
Dynamic Viscosity (Brookfield)	@-25°C	mPa.s	ASTM D2983	3200
Dynamic Viscosity (Brookfield)	@-40°C	mPa.s	ASTM D2983	32000
Density	@15°C	kg/m^3	ISO 12185	843
Flash Point (COC)		°C	ISO 2592	234
Pour Point		°C	ISO 3016	-51
Foaming Tendency			ASTM D892	
S1		ml/ml		0/0
S2		ml/ml		20/0
S3		ml/ml		0/0
+0.1% Water				
S1		ml/ml		0/0
S2		ml/ml		20/0
S3		ml/ml		0/0
Copper Corrosion	3h @150°C		ASTM D130	1A
FZG Failure Load Stage			ASTM D5182	11

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**

  Shell Spirax S6 CXME 5W-30 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 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.