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Technical Data Sheet

Formerly Known As: **Shell Corena D**

Shell Corena S2 R 46

Rotary Air Compressor Oil

- Reliable Protection
- Standard Life Applications

Shell Corena S2 R is a high quality detergent based air compressor oil designed to deliver reliable lubrication of rotary sliding vane and screw air compressors. It uses a well established detergent containing additive system to provide good protection and performance for compressors running at up to 15 bar and 100°C discharge temperatures with oil maintenance intervals of up to 4000 hours.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

• Long oil life – Maintenance saving

Shell Corena S2 R is capable of providing oil maintenance intervals of up to 4000 hours (where allowed by manufacturers) even when operating at maximum discharge temperatures of up to 100°C.

It is formulated to help:

- Resist formation of carbon deposits in sliding vane slots in vane compressors
- Resist formation of deposits on rotating components in screw compressors
- Maintain excellent internal surface cleanliness particularly in oil/air separator and coalescer systems.
- Exact oil maintenance interval will depend on intake air quality, duty cycle and ambient conditions. For hot and humid type climates as found in the Asian and Pacific regions, a reduced oil drain period is recommended (consult OEM recommendations).
- **Outstanding wear protection**
With many years of successful application, Shell Corena S2 R helps provide effective protection of internal metal surfaces from corrosion and wear.
It contains a well proven anti-wear system to help prolong the life of critical parts such as bearings and gears.
- **Maintaining system efficiency**
Air release and prevention of foaming are critical performance characteristics in a compressor oil, ensuring reliable start-up and continuous compressed air availability. Shell Corena S2 R is designed to provide rapid air release without excessive foaming to give trouble-free operation even under cycling conditions.

In addition, Shell Corena S2 R allows the separation of water-oil emulsions from the air stream in oil/air separators and dryer units.

Main Applications



• Rotary sliding vane air compressors

Suitable for oil flooded / oil injected vane type air compressors.

• Screw air compressors

Suitable for oil flooded / oil injected air compressors, operating at up to 15 bar and 100°C air discharge temperatures. Machines running in mobile equipment, e.g. construction sites, railways, particularly in severe environments.

• Rotary vacuum pumps

Shell Corena S2 R may be used in applications such as rotary and sliding vane vacuum pumps. For medium vacuum pressures approaching 1x10⁻³ mbar it is suggested that Shell Vacuum Pump Oil S2 R 100 be used.

Specifications, Approvals & Recommendations

- ISO 6743-3:2003
- Shell Corena S2 R is known and used by major OEMs throughout the world.

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

Compatibility & Miscibility

- **Seal Compatibility**

Shell Corena S2 R oils are compatible with seal materials specified for use with mineral oils.

Typical Physical Characteristics

Properties			Method	Shell Corena S2 R 46
ISO Viscosity Grade			ISO 3448	46
Kinematic Viscosity	@40°C	mm ² /s	ASTM D445	46
Kinematic Viscosity	@100°C	mm ² /s	ASTM D445	6.9
Density	@15°C	kg/m ³	ASTM D1298	875
Flash Point (COC)		°C	ASTM D92	230
Pour Point		°C	ASTM D97	-33
Ash Sulphated		%	DIN 51575	0.43
Oxidation Stability (delta CCT)		%	DIN 51352-1	0.45
Water separability	@54°C	min	ASTM D1401	40
FZG Test		Load Stage Failure	CEC-L-07-A-85	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 Corena S2 R Oil 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.

Viscosity - Temperature Diagram for Shell Corena S2 R

