Technical Data Sheet

Previous Name: **Shell Corena S**

Shell **Corena** ***S3 R 32***

- *Long Life*
- *Improved Efficiency*

Premium Rotary Air Compressor Oil

Shell Corena S3 R is a premium quality air compressor oil designed to deliver high performance lubrication of rotary sliding vane and screw air compressors. It uses an advanced additive system to provide excellent protection and performance for compressors running at up to 20 bar and 100°C discharge temperatures with oil maintenance intervals of up to 6000 hours.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long oil life – Maintenance saving**

  Shell Corena S3 R is capable of providing oil maintenance intervals of up to 6000 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
- Resist thermal breakdown and deposit formation to 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 S3 R helps provide effective protection of internal metal surfaces from corrosion and wear.

  It contains an advanced ashless 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 S3 R is designed to provide rapid air release without excessive foaming to give trouble-free operation even under cycling conditions.

  In addition, Shell Corena S3 R has excellent water separation properties to help ensure continuous efficient operation of the compressor even in the presence of water.

Main Applications



- **Rotary sliding vane air compressors**

  Shell Corena S3 R is suitable for oil-flooded or oil-injected vane compressors, operating at pressures of up to 10 bar and with air discharge temperatures of up to 100°C.

- **Screw air compressors**

  Suitable for oil flooded or oil injected, single or two-stage rotary compressors, operating at pressures of up to 20 bar and with air discharge temperatures of up to 100°C.

Specifications, Approvals & Recommendations

- ISO 6743-3A-DAJ

  For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

Compatibility & Miscibility

- **Seal Compatibility**

  Shell Corena S3 R oils are compatible with seal materials specified for use with mineral oils.

Typical Physical Characteristics

Properties			Method	Shell Corena S3 R
ISO Viscosity Grade			ISO 3448	32
Kinematic Viscosity	@40°C	mm^2/s	ASTM D 445	32
Kinematic Viscosity	@100°C	mm^2/s	ASTM D 445	5.4
Density	@15°C	kg/m^3	ASTM D 1298	864
Flash Point (COC)		°C	ASTM D 92	218
Air Release		mins	ASTM D 3427	2
RPVOT		mins	ASTM D 2272	700
FZG Test		LS Fail	CEC-L-07-A-95	11
Pour Point		°C	ASTM D 97	-30
Water Separability	@54°C	mins	ASTM D 1401	15

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 S3 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 Material Safety Data Sheet, which can be obtained from http://www.epc.shell.com/

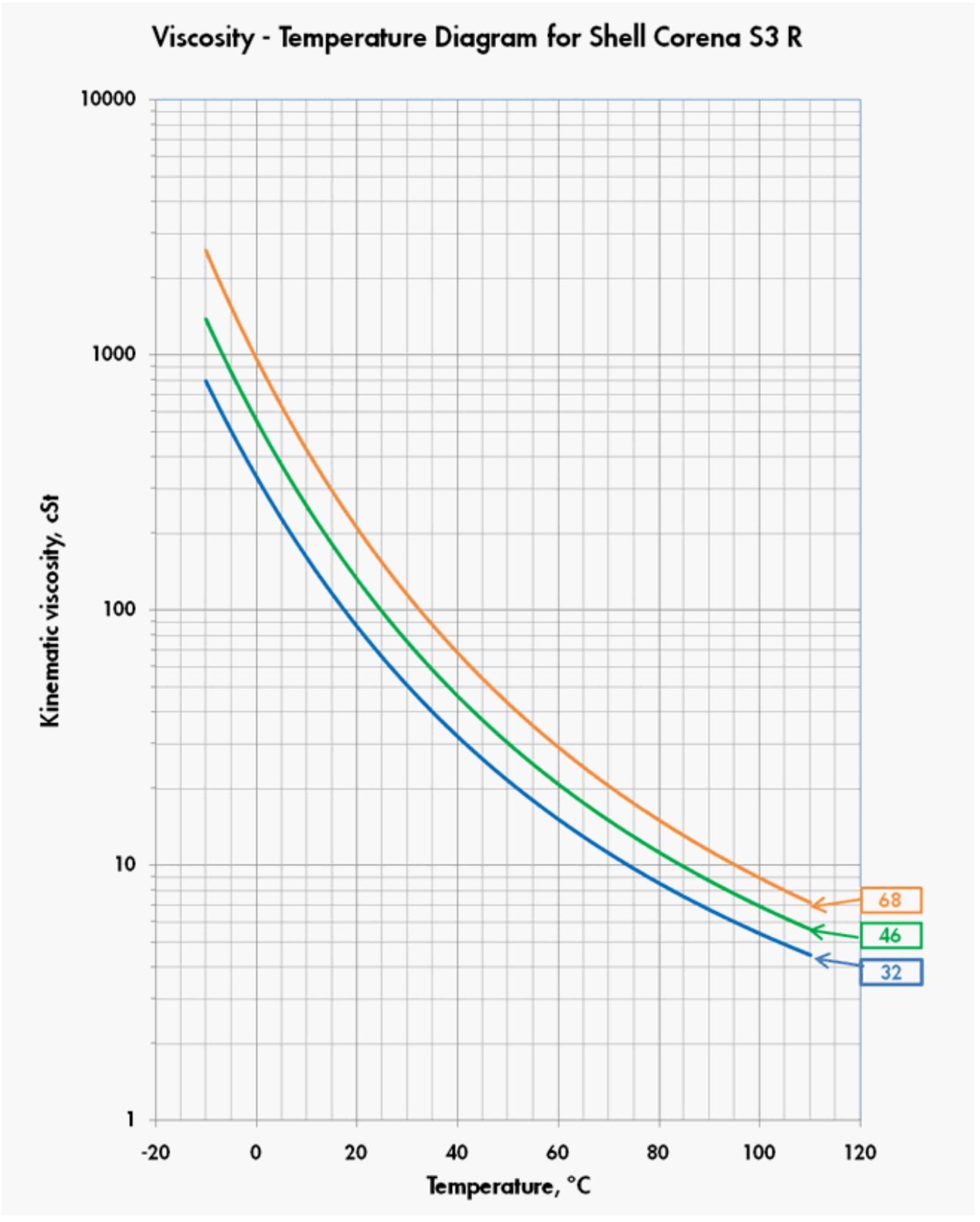
- **Protect the Environment**

  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.


Viscosity - Temperature Diagram for Shell Corena S3 R
Kinematic viscosity, cSt
10000
1000
100
10
1
-20
0
20
40
60
80
100
120
Temperature, °C
68
46
32