



Previous Name: **Shell Corena AS**

# Shell Corena **S4 R**

## *Advanced Synthetic Rotary Air Compressor Oil*

- **EXTRA LONG LIFE**
- **IMPROVED EFFICIENCY**
- **SEVERE APPLICATIONS**

Shell Corena S4 R is an advanced synthetic air compressor oil incorporating a unique high performance additive system. It is designed to deliver the highest 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 pressures over 25 bar and in excess of 100°C discharge temperatures with oil maintenance intervals of up to 12,000 hours.

### Performance Benefits

- **Long oil life – Maintenance saving**

Shell Corena S4 R is capable of providing oil maintenance intervals of up to 12,000 hours (where allowed by manufacturers) even when operating at maximum discharge temperatures in excess of 100°C.

The advanced formulation of Shell Corena S4 R helps deliver exceptional oil life through:

- Exceptional resistance to thermal and chemical breakdown.
- Resist formation of deposits on rotating components in screw compressors and in sliding vane slots for continuous efficient operation.
- Exceptionally low levels of deposit formation to help 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**

Shell Corena S4 R helps provide exceptional protection and 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**

Shell Corena S4 R is designed to provide rapid air release without excessive foaming to give trouble-free operation even under cycling conditions helping to ensure reliable start-up and continuous compressed air availability.

Shell Corena S4 R has low volatility and oil carryover to provide reduced oil top-up requirements in combination with increased air quality.

In addition, Shell Corena S4 R has excellent water separation properties to help ensure continuous efficient operation of the compressor even in the presence of water.

### Applications

- **Rotary sliding vane and screw air compressors**  
Shell Corena S4 R is suitable for oil-flooded/oil-injected, single or two-stage compressors, operating at pressures of in excess of 25 bar and with air discharge temperatures of over 100°C (including intermittent operation under these conditions).
- **Severe service conditions**  
May also be used where exceptionally high ambient temperatures are found, when the oil temperature cannot be reduced to normal levels.
- **ABB Turbochargers**  
The product is recommended for use in ABB turbochargers fitted to low and medium speed diesel engines used in marine and power generation applications.



Advice on applications not covered in this leaflet may be obtained from your Shell representative

## Specifications and Approvals

Shell Corena S4 R meet the requirements of: ISO 6743-3A-DAJ.

Shell Corena S4 R 68 is approved by ABB for use in VTR turbochargers, with a maximum oil change interval of 5000 hours (HZTL 90617, list 3a).

## Health and Safety

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

## Miscibility

Shell Corena S4 R oils are fully miscible with mineral oils, although dilution with mineral lubricants will markedly reduce its performance. Care must be taken to avoid mixing Shell Corena S4 R with certain other types of synthetic fluids. Contact your Shell representative for further information

## Seal Compatibility

Shell Corena S4 R oils are compatible with seal materials specified for use with mineral oils.

## Protect the Environment

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

## Advice

Advice on applications not covered in this leaflet may be obtained from your Shell representative.

## Typical Physical Characteristics

Shell Corena S4 R		32	46	68
ISO Viscosity Grade	ISO 3448	32	46	68
Kinematic viscosity	ASTM D445			
at 40 °C	mm <sup>2</sup> /s	32	46	68
at 100 °C	mm <sup>2</sup> /s	6	7.7	10.2
Viscosity Index (VI)	DIN ISO 2909	136	135	135
Density at 15 °C	kg/m <sup>3</sup> ASTM D1298	830	843	848
Flash point COC	°C ASTM D92	218	230	248
Pour point	°C ASTM D97	-45	-45	-45
Air Release	minutes	2	2	4
Rust prevention properties	ASTM D665-B	pass	pass	pass
Water separability	mins ASTM D1401	10	10	10
Rotating Pressure Vessel Oxidati	mins ASTM D2272	2200	2200	2200
FZG load carrying test	failure load stage CEC-L-07-A-95	12	>12	>12

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.



## Viscosity - Temperature Diagram for Shell Corena S4 R

