



Shell Corena Oils AS

Advanced synthetic air compressor lubricants

Shell Corena AS is an advanced air compressor lubricant using unique additive technology, capable of giving supreme performance in oil-flooded air compressors of screw or vane design. Based on specially selected PAO base fluids, Corena AS provides long oil life and effective lubrication in severe applications.

Applications

- **Rotary sliding vane and screw air compressors**
Oil-flooded single and two-stage compressors, in particular those operating with output pressures of greater than 20 bar and with air discharge temperatures greater than 100°C (including intermittent operation under these conditions).
- **Equipment running under arduous 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.

Performance Features and Benefits

- **Excellent thermal stability**
Corena AS reduces sludge and deposit formation from thermal degradation processes, even at very high temperatures, maintaining compressor efficiency.
- **Excellent water shedding properties**
The product is easily separated from water, keeping the system in good condition even when contaminated with water.
- **Outstanding resistance to oxidation**
Corena AS resists the formation of carbon deposits and the formation of sludge in all moving parts of sliding vane and screw compressors to ensure

maximum output of the machine throughout the service interval.

- **Very good rusting and wear protection**
Effectively protects all metal surfaces from corrosion. Protects all sensitive machinery parts, e.g. gears, screws, bearings, from wear and prolongs the service intervals.
- **Excellent low volatility characteristics**
Low volatility giving low oil consumption and low oil carry over. The top up rates are low.
- **Very good surface properties**
Resulting in a low foaming tendency, very good air release and water shedding properties. This helps to separate oil from air and water in two-stage compressor intercoolers, oil/water separators and drier units.
- **Extended oil drain intervals**
Corena AS will allow for significant increases in oil drain intervals, where allowed by manufacturers - up to a maximum of 12000 hours, even when operating at a continuous maximum discharge air temperature in excess of 100°C. Depending on intake air quality, duty cycle and ambient conditions, especially in hot and humid type climates as found in the Asian and Pacific regions, a reduced oil drain period is recommended.
- **High viscosity index**
Reduced change of viscosity with change in operating temperature in comparison to conventional mineral oil-based products. This provides low starting viscosity together with higher viscosity at operating temperature.

Specifications and Approvals

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

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

Miscibility

Corena AS is fully miscible with mineral oils, although dilution with mineral lubricants will markedly reduce its performance. Care must be taken to ensure that Corena AS is not mixed with some type of synthetic fluids. Contact your Shell Representative for further information

Seal compatibility

Corena AS is compatible with all sealing materials commonly used in air compressors.

Health & Safety

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

Protect the environment

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

Typical Physical Characteristics

Corena AS			32	46	68
ISO Viscosity Grade		ISO 3448	32	46	68
Kinematic Viscosity		ASTM D445			
at 40 °C	mm ² /s		32	46	68
at 100 °C	mm ² /s		6,0	7,7	10,4
Density at 15 °C	kg/m ³	ASTM D1298	843	843	846
Flash point (COC)	°C	ASTM D92	230	235	258
Pour Point	°C	ASTM D97	-50	<-45	<-45
Viscosity Index (VI)		DIN ISO 2909	135	135	139
Rust prevention properties		ASTM D665-B	pass	pass	pass
Water separability	min	ASTM D1401	10	10	10
Rotating Pressure Vessel Oxidation Test	min	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.