

Shell Corena Oil AP

Advanced synthetic lubricant for reciprocating air compressors



Shell Corena AP is an advanced reciprocating air compressor lubricant and is based on specially selected synthetic ester fluids. It incorporates the latest additive technology to provide the highest possible performance.

Applications

- **Reciprocating air compressors**
All industrial reciprocating air compressors, in particular up to and above air discharge temperatures of 220°C with continuous high delivery pressures.
- **Breathing air compressors**
Corena AP may be used in breathing air compressors, provided subsidiary clean-up apparatus is used to ensure that the air produced is fit for breathing.

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

Performance Features and Advantages

- **Outstanding performance in all operating conditions**
Developed specifically for heavy duty reciprocating air compressors. This includes reciprocating air compressors subjected to overloading, intermittent or continuous operation. Corena AP is designed to provide safe, reliable and effective lubrication for extended service periods where mineral compressor lubricants are unsatisfactory.
- **Extended service intervals**
The extreme low tendency for deposit build-up ensures continued high compressor performance over long periods. It enables the normal valve maintenance period, typically between 250 and 1000 hours of operation using conventional mineral oils, to be extended to 2000, or even 4000 hours.
- **Maximum safety for air lines**
The absence of deposit formation has a very important safety-related benefit. In discharge air-lines, the combination of rust particles, dispersed in carbonaceous deposits, coupled with heat from recently compressed air, can cause an exothermic reaction leading to the possibility of fires and explosion. Corena AP helps to minimise the likelihood of this danger arising.
- **Excellent 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 oxidation resistance**
Resistant to the formation of carbon deposits and lacquer on valves and piston crowns, caused by the by-products of corrosion such as ferric oxides and hydroxides, at high working temperatures and pressures. Such deposits can cause serious damage, lower compressor efficiency and increase maintenance costs.
- **Excellent water separation properties**
Separates readily from water preventing accelerated corrosion and facilitating separation from condensate.

Specification and Approvals

DIN 51506 VDL
ISO/DP 6521-L-DAB - medium duty
ISO 6743-3:2003 DAB - Severe duty
EN 12021

Seal compatibility

Corena AP, in common with other ester-based lubricants, is not compatible with all seal materials, and some older compressors may need to have the seals changed before they can be run on the new grades.

Compatibility Guide

Acceptable	High nitrile content (SE85)	>36% acrylonitrile
Majority acceptable	Medium nitrile content (SE70)	30 - 36% acrylonitrile
Not recommended	Low nitrile content	<30% acrylonitrile

Corena AP is miscible with mineral oils, although dilution with mineral lubricants will markedly reduce its performance.

Health and 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 authorized collection point. Do not discharge into drains, soil or water.

Typical Physical Characteristics

Corena AP			68	100	150
ISO Viscosity grade		ISO 3448	68	100	150
Performance standard	Typ	DIN 51506	VDL 68	VDL 100	VDL 150
Kinematic viscosity		ASTM D445			
at 40°C	mm ² /s		68	100	150
at 100°C	mm ² /s		8.5	10.2	13.8
Density at 15°C	kg/m ³	ASTM D1298	990	988	982
Flash point COC	°C	ASTM D92	250	260	260
Pour point	°C	ASTM D97	-51	-39	-39
Sulphated ash	%m	DIN 51575	<0.02	<0,02	<0.02
Rust prevention properties (steel)		ASTM D665A (24 hr)	Pass	Pass	Pass
Copper corrosion		ASTM D130 (100°C/3hr)	1b	1b	1a
Water separability		ASTM D1401			
at 54°C	min		30	-	-
at 82°C	min		-	25	10

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