

## Aircol PD Range

Air Compressor Lubricants

### Description

Castrol Aircol™ PD oils are a range of compressor oils, based upon highly refined mineral oils, which are intended for the lubrication of both reciprocating and rotary air compressors.

### Application

Aircol PD grades are ashless oils recommended for the lubrication of rotors, bearings and gears in rotary compressors, especially the oil flooded screw type with lubricant drain cycles of up to 2000 hours under normal use. Normal use in screw type compressors is defined by a maximum air discharge temperature  $\leq$  100°C as defined by ISO 6743-3:2003.

Aircol PD can be used for either normal or severe duty lubrication of reciprocating and rotary drip-feed air compressors, as defined by ISO 6743.

Normal duty is described as:-

- discharge temperatures  $\leq$  165°C
- differential pressures  $\leq$  2.5 MPa (25 bar)
- discharge pressures  $\leq$  7.0 MPa (70 bar).

Severe Duty is described as:-

- discharge temperatures  $>$  165°C
- differential pressures  $>$  2.5 MPa (25 bar)
- discharge pressures  $>$  7.0 MPa (70 bar)

Aircol PD compressor oils exhibit low carbon forming tendencies and meet the requirements of the DIN 51506 VD-L classification for reciprocating compressors having air discharge temperatures up to 220°C.

Selection of the required viscosity grade should be based upon the compressor manufacturers' recommendation however as a general guide Aircol PD 32 and 46 are suitable for oil flooded rotary compressors, whereas Aircol PD 68 and 100 would be selected for lubricating the crankcase and cylinders of reciprocating compressors. Aircol PD 150 is recommended for sliding-vane compressors, or for reciprocating units at high ambient temperatures.

The Aircol PD range is fully compatible with nitrile, silicone and fluropolymer seal materials.

- Aircol PD is classified as follows:
- DIN 51506 classification - VDL
- ISO 6743/4 - DAA and DAB for reciprocating air compressors, DAG for rotary air compressors

Aircol PD meets the requirements (for appropriate viscosity grade) of major compressor manufacturers such as Atlas Copco, Champion, Sullair, Compair/Broomwade, Ingersoll-Rand, Kaeser and Bauer.

### Advantages

- Good water separation characteristics allows condensation to readily separate from the oil, minimising the risk of emulsions which could block the oil separator element.
- Fully inhibited against corrosion which enables protection even when operating under humid conditions.
- Good thermal stability, low volatility and low carbon formation reduces the risk of fire and explosion and leads to a longer operating life (up to 2000 hours).
- Low deposit forming tendencies extends oil change intervals and provides longer air filter life which contributes to a reduction in maintenance costs.
- Excellent coalescing properties mean little carry over of oil in the air stream.

## Typical Characteristics

Name	Method	Units	Aircol PD 32	Aircol PD 46	Aircol PD 68	Aircol PD 100	Aircol PD 150
Product Code			35121	35136	35146	35159	35161
Density @ 15C, Relative	ISO 12185/ ASTM D4052	g/ml	0.88	0.88	0.88	0.89	0.89
V.K. @ 40C	ISO 3104/ ASTM D445	mm <sup>2</sup> /s	32	46	68	100	150
K.V. @ 100°C	ISO 3104/ ASTM D445	mm <sup>2</sup> /s	5.6	6.7	8.6	11.4	15
Viscosity Index	ISO 2909/ ASTM 2270	-	100	97	96	100	100
Foam Sequence I	ISO 6247/ ASTM D892	mls/mls	30/0	30/0	30/0	30/0	30/0
Flash Point, COC	ISO 2592/ ASTM D92	°C/°F	226/439	232/450	232/450	253/487	256/493
Pour Point	ISO 3016/ ASTM D97	°C/°F	-21/-8	-21/-6	-21/-6	-12/10	-9/16
Water Separability @ 54°C	ISO 6614/ ASTM D1401	Mins	15	15	15	-	-
Water Separability @ 82°C	ISO 6614/ ASTM D1401	Mins	-	-	-	20	20
Rust Test (24 hr synthetic sea water)	ISO 7210/ ASTM D665B	-	Pass	Pass	Pass	Pass	Pass
Conradson carbon residue after aging (Pneurop)	DIN 51352 part 2	%	0.7	0.7	0.7	<3.0	<3.0
RPVOT	ASTM D2272	mins	270	270	270	-	-

Subject to usual manufacturing tolerances.

## Additional Information

Castrol Aircol PD compressor oils are available in a wide range of viscosities, to suit different types of compressors operating in varying ambient temperatures. Selection of the required viscosity grade should be based upon the compressor manufacturers recommendations for the appropriate ambient temperature range, which will have been chosen to provide the best compromise between maintaining a fluid film between the working surface and minimising the amount of power absorbed by fluid friction in this oil film.

## Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing condition

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10 Junction Avenue , Parktown , Johannesburg , 2193 , South Africa

+27 11 488 5111, 0860 222 166 (SA), 0800 111 551 (SA)

[www.castrol.co.za](http://www.castrol.co.za)