



Product Data

## Aircol PG 185

Synthetic gas compressor oil

### Description

Aircol PG 185 is a high performance synthetic gas compressor oil based on poly-alkylene glycol, for the lubrication of compressors handling hydrocarbon and chemical gases. The lubricant contains oxidation and corrosion inhibitors, providing excellent thermal and oxidation stability, together with the necessary corrosion protection for the compressor.

### Application

Aircol PG 185 has good lubricity characteristics and a very high viscosity index which benefits high temperature operations. It is for use in the working sumps of both rotary and reciprocating compressors where the lubricant is in continuous contact with the gas being compressed. If mineral oils were used in these applications, the gas would dissolve and cause a drastic reduction in oil viscosity, which could in turn lead to compressor failure. Hydrocarbon gases dissolve to a much lesser extent in Aircol PG 185 ensuring longer working life and adequate lubrication performance.

Aircol PG 185 may be used with a wide range of gases, including:

- Liquified natural gases such as methane and ethane.
- Liquified petroleum gases such as propane and butane.
- Hydrocarbon chemical gases such as ethylene, propylene and butylene.
- Chemical gases such as ammonia, vinyl chloride and butadiene.

### Advantages

Aircol PG 185 has low solvency properties with the hydrocarbon and chemical gases, which can enter the crankcases of gas compressors, consequently avoiding a significant fall in viscosity and lubricant performance.

Being totally synthetic, this product does not suffer the tendency of mineral oils to break down or polymerise to form gums, resins and carbon. It has a high viscosity index which benefit extreme temperature operations. Finally, Aircol PG 185 can be employed in the widest range of LPG, LNG hydrocarbon and chemical gases including butadiene, methane, ethane, propane.

### Product Performance Claims

Aircol PG 185 meets the requirements of Sulzer Burckhard A.G. Winterhur for use in K-type gas cargo compressors.

### Additional Information

Normal industrial paints are not compatible with this lubricant. Surfaces should be left unpainted or alternatively should be painted with a two component coating such as epoxy resins. This product is not miscible with mineral oils.

Care must be taken to ensure that seal materials are compatible with Aircol PG 185. Recommended materials are nitrile rubber (NBR), fluorosilicone rubber and vinyl-methyl-polysiloxane rubber (VMQ). Incompatible materials are likely to shrink or swell excessively, thus causing either severe leakage or seizure of the seal.

## Typical Characteristics

| Name                                                         | Method          | Units              | Aircol PG 185 |
|--------------------------------------------------------------|-----------------|--------------------|---------------|
| Specific Gravity @ 20°C / 68°F                               | ASTM D1298      | -                  | 1.050         |
| Kinematic Viscosity @ 40°C / 104°F                           | ASTM D445       | mm²/s              | 185           |
| Kinematic Viscosity @ 100°C / 212°F                          | ASTM D445       | mm²/s              | 35            |
| Viscosity Index                                              | ASTM D2270      | -                  | 230           |
| Pour Point                                                   | ASTM D97        | °C (°F)            | -40 (-40)     |
| Flash Point - open cup method                                | ASTM D92        | °C (°F)            | >280 (>536)   |
| Foam Sequence I - tendency / stability                       | ASTM D892       | ml/ml              | 10/0          |
| Foam Sequence II - tendency / stability                      | ASTM D892       | ml/ml              | 0/0           |
| Foam Sequence III - tendency / stability                     | ASTM D892       | ml/ml              | 0/0           |
| Copper corrosion (3 hrs@100°C/212°F)                         | ASTM D130       | Rating             | 1a            |
| Rust test - distilled water                                  | DIN ISO 7120    | Rating             | Pass          |
| Four Ball Wear test - Wear Scar Diameter (40 kg / RT / 1 hr) | IP 239          | mm                 | 0.48          |
| Four Ball Weld Load test - Weld Point                        | IP 239          | kg                 | 180           |
| FZG Gear Scuffing test - A/8.3/90                            | DIN ISO 14635-1 | Failure Load Stage | >11           |

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

## 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 the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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