Product Data

AIRCOL SN RANGE

Issue Number 1
03/07/2002

Synthetic Air Compressor Lubricant

DESCRIPTION

Castrol Aircol SN compressor lubricants are high quality synthetic diesters.

APPLICATION

Castrol Aircol SN compressor lubricants were developed to cope with the severe operating conditions experienced in rotary screw, rotary vane and reciprocating air compressors operating at high compression ratios and high discharge temperatures. Under these conditions Aircol SN compressor oils offer much reduced carbon forming tendencies and extended oil life when compared to mineral oils due to their much higher oxidation resistance.In reciprocating units, Aircol SN grades have up to eight times the service life of mineral oils.

FEATURES	BENEFITS
♦ Superior oxidation stability ,	♦ Reduced maintenance, extended oil life and cleaner operations, minimises carbon formulation and provides extended valve life.
♦ Improved lubricity and film strength	♦ Reduced oil consumption due to a reduction in the feed rate to the cylinder walls and piston rings without increasing wear rates. Since less lubricant is consumed the downstream air is also of higher quality.
♦ Higher film strength and excellent anti-wear properties	♦ Reduced compressor down-time due to less wear on all moving parts, longer machine life and reduced maintenance.
♦ Excellent high temperature performance	♦ Due to their the operating range of Aircol SN grades extends well beyond that of conventional mineral oils. The high spontaneous ignition temperature gives greater safety by reducing the possibility of downstream fires and explosions.

AIRCOL SN RANGE

TYPICAL PHYSICAL CHARACTERISTICS

ISO Viscosity Grade	68	100
Kinematic Viscosity		
@ 40ºC, cSt	68	100
@ 100ºC, cSt	7.5	10.3
Viscosity Index	67	89
Relative Density @ 20ºC	0.925	0.960
Open Flash Point, ºC	266	246
Pour Point, ºC	-33	-48

COMPATIBILITY OF AIRCOL SN

Mineral Oils

Aircol SN grades are compatible with conventional non-detergent mineral oils such as the Aircol PD series. Contamination with detergent compressor or engine oils, or automatic transmission fluids as are recommended for certain types of compressor can lead to foaming, filter plugging or sludge formation.

Seal Material

Certain types of seals used with conventional mineral oils can produce excessive swelling if used with synthetic fluids. A list of suitable seal materials listed on Page 3.

Plastics

Polycarbonate filter and lubricator housings should not be used with synthetic diester fluids and should be replaced with metal components. A list of suitable plastics is given on Page 4.

Gases

Aircol SN lubricants can be used for the compression of a wide range of gases in addition to air. A list of acceptable and incompatible gases is given on Page 3.

Paints

See list on Page 4.

Metals

See list on Page 4.

AIRCOL SN RANGE

SEAL MATERIAL* - **Acceptable (in order of preference)**

Fluorocarbon (Viton, Teflon)	High Nitrile Rubber (Buna N, NBR) (1)
Fluorsilicone Rubber	Polyacrylate Rubber
Silicone Rubber	Chlorosulphonated Polyethylene
Epichlorohydrin	
Medium Nitrile Rubber (Buna N, NABR) (2)	Polyurethane

Not Acceptable

Polysulphide (Thiokol)	Butyl Rubber
Ethylene-Propylene Terpolymer (EPDM)	Ethylene-Propylene Copolymer (EPR)
Polychloroprene (Neoprene)	Natural Rubber Ethylene/Acrylic
Low Nitrile Rubber (Buna N, NBR) (3)	Styrene-Butadiene Rubber (Buna S, SBR)

GASES - Acceptable Gases

Acetylene	Coke Oven Gas	Isobutane
Argon	Ethane	Methane
Blast Furnace Gas	Ethylene	Neon
Butane	Helium	Nitrogen
Butadiene	Hydrogen	Nitrous Oxide
Carbon Dioxide	Hydrogen Sulphide	Propane
Carbon Monoxide	Isobutylene	Sulphur Dioxide
Syngas	-	-

Not Acceptable

Chlorine	Oxygen
Hydrogen-Chloride	Ammonia

Product Data

AIRCOL SN RANGE

PLASTICS

ACCEPTABLE	MARGINAL	NOT ACCEPTABLE
Nylon (including filled)	Polyurethane	Polyethylene
Fluorocarbon (Teflon)	Polypropylene	Polycarbonate (Lexan)
Polyacetal (Delrin, Celcon)	Polysulphone	Acrylic (Lucite, Plexols)
-	-	Polyvinyl Chloride
-	-	ABS (Acrylonitrile/Butadiene Styrene)

PAINTS

ACCEPTABLE	MARGINALLY ACCEPTABLE	NOT ACCEPTABLE
Epoxy	Alkyls (baked finish preferred)	Acrylic
Baked Phenolic	Phenolic	Latex (household)
2 Component Urethane	Single Component Urethane	Vinyl (PVC)
Moisture Cure Urethane	Industrial Latex	Lacquer

METALS

ACCEPTABLE	MARGINALLY ACCEPTABLE	NOT ACCEPTABLE
Steel Alloys	Cadmium	Zinc (5)
Aluminium Alloys	-	Lead
Copper & Alloys (4)	-	-
Tin	-	-
Nickel	-	-
Inconel, Monel	-	-

NOTES

1. Greater than 36%

2. 30% to 36% Acrylonitrile

3. Less than 30% Acrylonitrile

4. Always minimise exposure to copper as this will extend the life of any lubricant - Aircol SN grades are formulated to inhibit copper corrosion

5. Avoid the use of galvanised (zinc) pipes

Health and Safety information sheets are available for all Castrol products from the address below:
Castrol (U.K.) Limited, Pipers Way, Swindon, Wiltshire SN3 1RE, England, Telephone: Orders/Enquiries (08459)645111, Technical Enquiries (01793)452111, Fax (01793)491442