



TECHNICAL DATA SHEET

INDUS-GEAR S PAG SERIES

The INDUS-GEAR S PAG series are a range of Polyalkylene Glycol base synthetic fluids, which provide outstanding load carrying properties and excellent thermal stability.

FEATURES

Purpose designed to provide excellent corrosion protection (ASTM D665, procedure B pass) and demulsibility characteristics (ASTM D1041)

Allow thermally stable operation at temperatures in excess of 200°C

Typical applications include the lubrication of calendars, and bevel, spiral bevel, helical, enclosed spur and worm gear units. The lubricants are free of sulphur, chlorine and lead based additives

Remain homogenous from below their pour point to temperatures in excess of 250°C

The anticipated service lifetime of all grades is substantially in excess of 10,000 hours at 100°C in industrial enclosed gear units, the performance allowing for extended drain intervals and, in some cases, for operation as a "Fill for Life" lubricant

General approval has been given for this lubricant range as a Type "G" lubricant in David Brown industrial enclosed gear units

FLUSHING PROCEDURES

When changing from mineral oil to PAG Synthetic Lubricant the following procedure should be followed:

Run system until the mineral oil is warm, then drain as fully as possible, particular attention being paid to reservoirs, lines etc, where oil may be trapped.

The system should be cleared of any residual sludge.

Flush the system with the minimum quantity of PAG by operating under no load, then drain the system whilst the fluid is warm. Repeat if necessary.

Seals, etc., should be inspected and if deteriorated then replaced.

Seals previously exposed to mineral oils may shrink when exposed to PAG, and therefore it may be advantageous to replace them.

Fill system with PAG. It is useful to inspect the lubricant after one or two days in use to make sure that it is free of extraneous materials. Contamination with significant quantities of other lubricants can, in some cases, lead to sludging, foaming and other problems.

MATERIALS COMPATIBILITY

Polyurethane based elastomers, leather, cork, asbestos, paper and board should be avoided.

Common seal and gasket materials are unaffected by PAG. Nitrile Rubber (NBR),

Fluoro-Silicone or Vinyl-Methyl Polysiloxane (Q) is recommended especially where high temperatures are involved.

Ordinary industrial paints soften in the presence of PAG. Internal gearbox surfaces should ideally be unpainted, or coated with resistant two-pack epoxy formulations PAG must never be mixed with mineral oil, and ideally not mixed with other polyglycol lubricants in order to preserve their anti-corrosion and sea water demulsification properties.

Details continue on next page.



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TYPICAL PHYSICAL CHARACTERISTICS

Product	PAG 150	PAG 220	PAG 320	PAG 460	PAG 680
Density @ 15°C	0.998	1.008	1.007	1.009	1.00
Viscosity @ 40°C	137.0 cSt	237.0 cSt	325.0 cSt	433.0 cSt	680.0 cSt
Viscosity @ 100°C	22.7 cSt	31.8 cSt	44.8 cSt	63.7 cSt	88.8 cSt
Viscosity Index	195	177	196	220	
Pour Point	-30°C	-30°C	-30°C	-30°C	-30°C
Flash Point	260°C	231°C	225°C	225°C	240°C
FZG failure load	>13	>13	>13	>13	>13
Timken OK Load	27 lbs	27 lbs	35 lbs	35 lbs	35 lbs
Weld Load	168 kgs	175 kgs	170 kgs	170 kgs	170 kgs
Corrosion Copper Strip	1b	1a	1b	1a	1a
Product Code	14220	14230	14530	14540	15790

This data sheet and the information it contains is believed to be accurate as of the date of creation. Please email technical@rockoil.co.uk or telephone +44 (0) 1925 636191 if you require any further information.