

BREOX IL SW RANGE

INTRODUCTION.

BREOX Industrial Lubricant SW Grades are a range of Polyalkylene Glycol based synthetic lubricants, which provide outstanding load carrying properties and excellent thermal stability. They have been purpose designed to provide excellent corrosion protection (ASTM D665, procedure B pass) and demulsibility characteristics (according to ASTM D1401).

APPLICATION

BREOX Industrial Lubricants SW Grades allow thermally stable operation at temperatures in excess of 200 °C. Typical applications include lubrication of calenders, piston compressors, and bevel, spiral bevel, helical, enclosed spur, and worm gear units. The lubricants are free of chlorine, sulphur and metal based additives including lead. They remain homogeneous 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 allows for extended drain intervals and, in some cases, for operation as a "Fill for Life" lubricant.

APPROVALS

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

Furthermore IL150SW, IL220SW and IL460SW meet the requirements set down under Defence Standard 05-50.1, No 29.

Physical and Performance Data

SW GRADE	150	220	320	460
Kinematic Viscosity (1P71) cSt @ 40 °C cSt @ 100 °C	150 25	237 31.8	325 44.8	433 63,7
Viscosity Index (IP 226)	195	177	196	220
Pour Point. °C (IP 15)	-30	-30	-30	-28
PMCC Flash Point. °C (IP 34)	191	231	225	225
Neutralisation, mgKOH/g (IP 139)	0.9	1.09	1.12	1.15
Specific gravity @ 20/20 °C (IP 160)	0.944	1.006	1.005	1.007
Oxidation stability Total Oxidation Products. % (IP 280)	.552	.554	.523	.500
Load carrying capacity FZG failure load (IP 334. A/8.3/90)	>13	>13	>13	>13
Timken OK Load. lbs. (ASTM D2782)	27	27	35	35
Weld Load, kg (ASTM D2783)	168	175	170	170
Corrosion, Copper Strip classification, 3 hrs. @ 100 °C (IP 154)	1b	1a	1b	1a
Corrosion (IP 135), Rust Prevention. Procedure A Procedure B	Pass Pass	Pass Pass	Pass Pass	Pass Pass
Volume of Foam, ml Sequence 1 Sequence 2 Sequence 3	nil/nil nil/nil nil/nil	nil/nil nil/nil nil/nil	nil/nil nil/nil nil/nil	nil/nil nil/nil nil/nil
Air Release (ASTM 3427) min @ 90 °C	19	17	27	25
Demulsibility (ASTM D1401) @ 82 °C Emulsion (ml) Free Water (ml)	3 37	3 37	0 40	0 40

IL150SW, IL220SW, IL460SW:

Lubricants tested to DEF. STANDARD 05-50.1, No 29

Metals		IL150SW	1L220SW	IL460SW
wt change mg/cm ² and appearance	Mg	No change Very light Tarnish	No change Very light Tarnish	No change Very light Tarnish
	Al	+0.01 Very light Tarnish	No change Very light Tarnish	-0.01 Very light Tarnish
	Cu	-0.05 3b Dark tarnish	-0.05 3b Dark tarnish	-0.31 4a Dark tarnish
	Cd	-7.9 moderate tarnish Heavy surface pitting	-1.62 moderate tarnish light surface pitting	-3.6 moderate tarnish light/moderate pitting
	Fe	-0.02 light tarnish	-0.02 light tarnish	-0.02 light tarnish
Kinematic Viscosity @ 40°C				
	Initial	137.3	206.2	432.7
	Final	142.4	229.3	400.6
Acid value mg KOH / g				
	Initial	1.05	1.12	1.09
	Final	0.29	0.63	0.71
Evaporation Loss % wt		1.5	1.3	2.0
Appearance		Dark golden brown no separation or gumming	Dark golden brown no separation or gumming	Dark golden brown no separation or gumming

FLUSH PROCEDURES

When changing from mineral oil to a **BREOX** Industrial Lubricant the following procedure should be followed:

- The system should be run until the mineral oil is warm, then it is drained as fully as possible, particular attention being paid to reservoirs, lines etc., where oil may be trapped. The system should be cleaned of residual sludge.
- Flush the system with the minimum quantity of **BREOX** Industrial Lubricant by operating under no load, then drain the system whilst fluid is warm. Repeat if necessary.
- Seals, etc., should be inspected and if deteriorated then replaced. Seals previously exposed to mineral oil may shrink when exposed to **BREOX** Industrial Lubricants, and therefore it may be advantageous to replace them. The system is then filled with Breox Industrial Lubricant. 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.

Remarks

Handling & Safety:

For all relevant health and safety data and handling information, reference is made to the Material Safety Data Sheet (MSDS) for this product, additional copies of which are available on request.

Storage:

Revision-No.

3.3-08.2004 Effective August 17, 2004

The product can be stored for at least 2 years at ambient storage conditions and temperature without any deterioration.

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