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Plurasafe® GL WI

(Breox® IL SW Series)

PAG based synthetic gear lubricant

Description

Plurasafe GL WI 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

Plurasafe GL WI 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

- DIN 51517-3
- David Brown Typ G lubricant
- Defence standard 05–50.1, No. 29 for GL WI 150, GL WI 220 and GL WI 460

Typical properties

Properties		Unit	GL WI 150	GL WI 220	GL WI 320	GL WI 460	Method
Viscosity grade	ISO VG		150	220	320	460	ASTM D-2422
Viscosity, kinematic	at 40 °C	mm^2/s	150	237	325	433	ASTM D-445
	at 100 °C	mm^2/s	25.0	31.8	44.8	63.7	
Viscosity index		–	195	177	196	220	ASTM D-2270
Density	at 20 °C	g/cm^3	0.994	1.006	1.006	1.006	ASTM D-4052
Flash point		°C	> 260	> 260	> 260	> 260	ASTM D-92
Pour point		°C	– 30	– 30	– 30	– 28	ASTM D-97
TAN	Total Acid Number	mg KOH/g	0.9	1.09	1.12	1.15	ISO 6618
Water	water content	%	< 0.05	< 0.05	< 0.05	< 0.05	ASTM D-1744
Foam	Sequence 1	ml	0/0	0/0	0/0	90/0	ASTM D-892
	Sequence 2	ml	0/0	0/0	0/0	20/0	
	Sequence 3	ml	0/0	0/0	0/0	0/0	
Air release	at 90 °C	min.	19	17	27	25	DIN ISO 9120
Copper corrosion	3 h/100 °C	–	1 b	1 a	1 b	1 a	ASTM D-130
Steel corrosion	steel finger A+B	–	no rust	no rust	no rust	no rust	ASTM D-665 A
Demulsibility	oil-water at 82 °C	ml	40-37-3	40-37-3	40-40-0	40-40-0	ASTM D-1401
Oxidation stability	total oxidation products	%	0.552	0.554	0.523	0.500	IP 280
Timken	OK LOAD	lbs	27	27	35	35	ASTM D-2782
Weld Load	weartest	kg	168	175	170	170	ASTM D-2783
FZG A/8.3/90	Failure Load Stage	FLS	> 13	> 13	> 13	> 13	ASTM D-5182

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

Metals		GL WI 150	GL WI 220	GL WI 460
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 3 b dark tarnish	– 0.05 3 b dark tarnish	– 0.31 4 a 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 at 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

Safety

When using this product, the information and advice given in our **Safety Data Sheet** should be observed. Due attention should also be given to the **precautions** necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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