



LUBRICANTS

AN HF SINCLAIR BRAND

# TECH DATA

## PEERLESS™ LLG & OG

### CALCIUM SULPHONATE GREASES

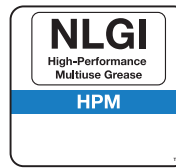
## INTRODUCTION

Petro-Canada PEERLESS™ greases are premium performance, multi-application greases formulated to reduce operating costs and provide extended protection in high temperature or wet operating conditions.

The PEERLESS line of extreme pressure (EP), high temperature multi-application greases are specially formulated to be highly effective in wet and marine environments. Based on a special calcium sulfonate complex thickener, these greases can absorb moderate amounts of water without softening, changing consistency or losing corrosion prevention capability.



PEERLESS LLG, OG1, OG2 and OG2 Red all meet NLGI Automotive Service Classification GC-LB for wheel bearing and chassis lubrication.



PEERLESS LLG and OG2 Red have met the standards for NLGI High Performance Multiuse (HPM) Certification

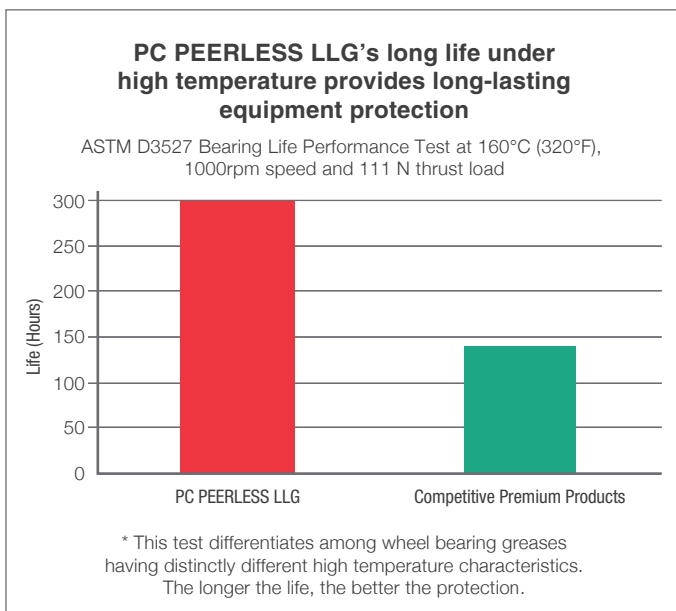
## FEATURES AND BENEFITS FOR PEERLESS LLG

### Long life under high temperature provides long-lasting equipment protection

- PEERLESS LLG lasts longer than competitive premium multi-application grease at high temperature
- PEERLESS LLG's high operating temperature provides extended protection under severe conditions compared to leading competitive products

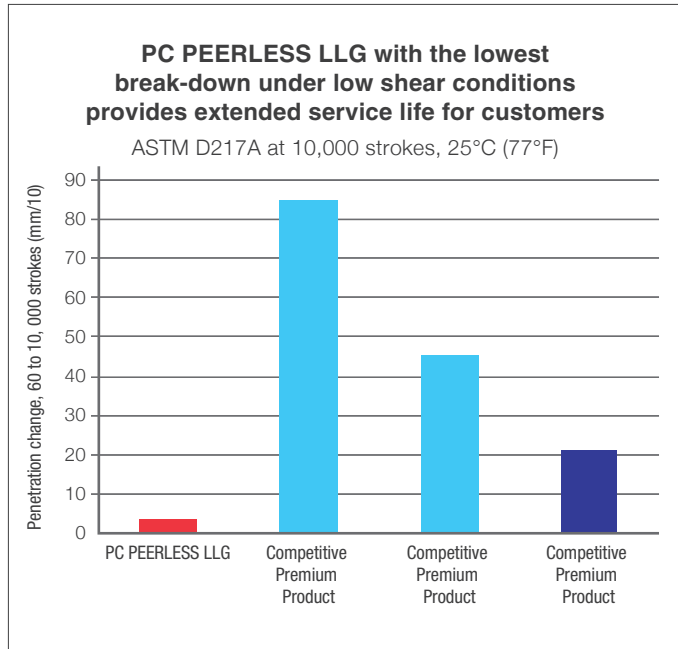
### Excellent water resistance

- PEERLESS LLG offers excellent resistance to water washout providing good rust and corrosion prevention
- Stays in place in wet and marine applications
- Maintains consistency after absorbing water
- Strongly resists water wash-off and lengthens lubrication intervals



### High mechanical stability in severe operating conditions

- PEERLESS LLG also lowers maintenance costs as a result of reduced product breakdowns under low to moderately high shear conditions
- Reduces bearing wear and extends equipment life
- Protects bearings under heavy loading



## FEATURES AND BENEFITS OF PEERLESS OG GREASES

### Excellent performance in the presence of water

- Stays in place in wet and marine applications
- Maintains consistency after absorbing water
- Excellent resistance to washout

### Wide temperature / pressure range

- Special thickener enhances high temperature and pressure capabilities

### Great rust and corrosion protection

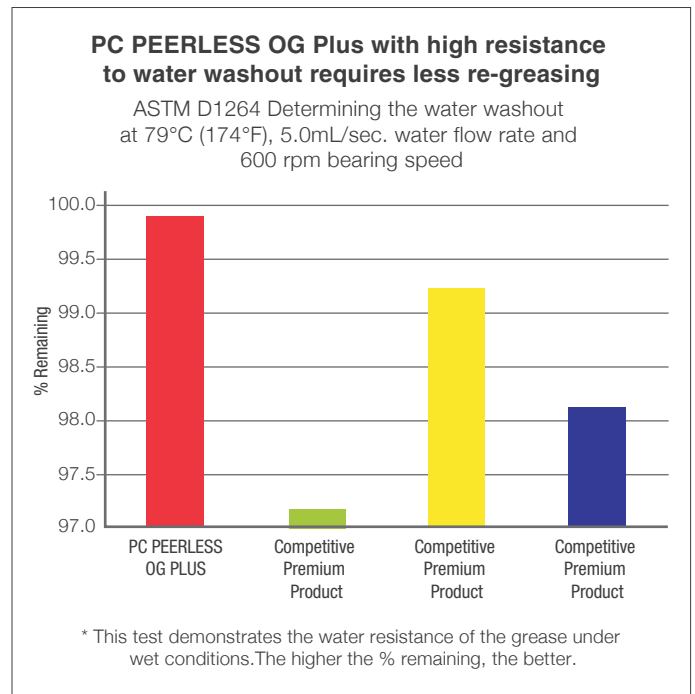
- Protects components in the presence of water
- Reduces maintenance costs

### Superior adhesive properties

- Protects rotating parts to reduce equipment costs
- Excellent resistance to washout for better protection

### State of the art formulations

- Excellent protection against rust and corrosion especially in marine applications
- Excellent adhesive properties to protect rotating parts and extending equipment component life
- Built-in, non-sacrificial anti-oxidant chemistry for long life



## APPLICATIONS

Petro-Canada PEERLESS LLG and OG Greases are formulated to provide excellent lubrication in a wide range of applications especially under high temperature and extremely wet operating conditions. PEERLESS greases are recommended for a full range of industrial and automotive applications including:

- General Manufacturing
- Pulp & Paper
- Fleet
- Forestry
- Power Generating
- Mining

### PEERLESS LLG

A premium multi-application calcium sulphonate complex grease, PEERLESS LLG provides outstanding oxidation stability, excellent water resistance, outstanding rust protection and excellent load carrying ability under high operating temperatures. It is particularly recommended for high temperature and long life applications which include:

- Equipment running intermittently at temperatures up to 200°C/392°F and extremely wet conditions
- Electric motor bearings
- Wheel bearings and automotive chassis
- Sealed-for-life bearings
- Constant velocity joints
- Small appliance
- Ovens and kilns

### PEERLESS OGO

A premium multi-application calcium sulphonate complex grease, PEERLESS OGO has excellent performance in the presence of water, wide operating temperature range, great rust and corrosion protection and superior adhesive properties. Applications include:

- Central lubricating systems
- Applications with lower ambient temperatures
- Applications with the requirement for a softer grade product

### PEERLESS OG1

A premium multi-application calcium sulphonate complex grease, PEERLESS OG1 has excellent performance in the presence of water, wide operating temperature range, great rust and corrosion protection and superior adhesive properties. Applications include:

- Wheel bearings
- Automotive chassis
- Central lubricating systems

### PEERLESS OG2 and OG2 Red

A premium multi-application calcium sulphonate complex grease, PEERLESS OG2 and OG2 Red have excellent performance in the presence of water, wide operating temperature range, great rust and corrosion protection and superior adhesive properties. Applications include:

- Wheel bearings
- Forklift mast slides
- Mining scoop trams
- Farming equipment
- Automotive chassis
- Power shovel bucket pins
- Rock crushers
- Pulp press roller bearings

### PEERLESS OG PLUS

A premium multi-application calcium sulphonate complex grease, PEERLESS OG Plus is polymer enhanced and has excellent performance in the presence of water, wide operating temperature range, great rust and corrosion protection and superior adhesive properties. Applications include:

- Dry and wet end bearings of pulp and paper machines
- Pulp press roller bearings
- Applications where superior adhesion is a key requirement

### PEERLESS SVG 102

A premium calcium sulphonate complex grease, PEERLESS SVG 102 has excellent performance in protecting valves against corrosion and deleterious effects of hydrogen sulphide present in the gas streams in the oil and gas industry. Applications include:

Applications include:

- Internal parts of valves used in production and distribution of sour gas
- Valves used in LPG and water injection systems in oil and gas industry

### PEERLESS XCG-FLEX

A premium calcium sulphonate complex coupling grease, PEERLESS XCG-Flex has outstanding mechanical stability and resistance to oil separation. It has a high-load carrying ability, high dropping point and excellent resistance to corrosion and water washout. It prevents oxidative fretting corrosion and protects against wear under potentially high gear tooth loadings and vibration. PEERLESS XCG-Flex meets AGMA coupling grease specifications CG-1 and CG-2. Applications include:

- High-speed flexible couplings where severe centrifugal forces are generated
- Industrial couplings of the gear and flexible steel type

## OPERATIONAL CONSIDERATIONS

PEERLESS line of products provides long wear protection under normal operating conditions. However, actual grease life is dependent upon system design and operating practices. No Nonsense Lubricants Warranty applies.

### TYPICAL PERFORMANCE DATA

Property	Test Method	PEERLESS							
		LLG	OG0	OG1	OG2	OG2 RED	OG PLUS	SVG 102	XCG-FLEX
NLGI Grade	D217	2	0	1	2	2	2.5	1	1
NLGI Standard		GC-LB HPM	-	GC-LB	GC-LB	GC-LB HPM	-	-	-
Colour	PCM 264	Burgundy	Tan	Tan	Tan	Red	Tan	Green-Grey	Brown
Texture / Appearance	PCM 264	Buttery/Smooth	Buttery/Smooth	Buttery/Smooth	Buttery/Smooth	Buttery/Smooth	Stringy/Smooth	Buttery/Smooth	Buttery/Smooth
Dropping Point, °C/°F	D2265	314/597	284/543	310/590	304/579	300/572	309/588	262/504	290/554
Worked Penetration, 60 strokes	D217A	284	366	329	276	270	249	324	335
Oxidation Stability 100 hrs, psi drop	D942	2.2	2	2	2	2	2	3	-
Base Oil Viscosity, cSt @ 40°C/SUS @ 100°F cSt @ 100°C/SUS @ 210°F	D445	100/523 10.8/63	38/193 7.3/50	53/270 8.9/56	73/378 9.4/58	73/378 9.4/58	78/406 9.4/58	80/412 11.2/64	329/1764 22.5/112
Viscosity with Polymer <sup>1</sup> cSt @ 40°C cSt @ 100°C		214 22	80.6 11.5	127 16.1	117 14.5	906 86.5	1358 128	159 17.6	4732 278
Four Ball Weld Point, kg	D2596	500	315	400	400	500	500	620	500
Four Ball Wear scar diam m	D2266	0.45	0.42	0.38	0.52	0.42	0.39	0.51	0.41
Copper Corrosion	D4048	1b	1b	1b	1b	1b	1b	1a	1b
Water Washout % @ 79°C /174°F	D1264	1.5	-	2.8	2.2	2.8	0.1	1.5	1.5
Temperature Range, °C Temperature Range, °F		-20 to 200 -4 to 392	-35 to 163 -31 to 325	-30 to 163 -22 to 325	-25 to 163 -13 to 325	-25 to 163 -13 to 325	-20 to 163 -4 to 325	-35 to 163 -31 to 325	-20 to 163 -4 to 325

The values quoted above are typical of normal production. They do not constitute a specification.

<sup>1</sup> This grease contains a polymer additive which increases the active base oil viscosity providing enhanced performance, protection and load carrying capabilities. Petro-Canada Lubricants' specification only covers the base oil viscosity and not the viscosity with polymer.

Learn more about us: [lubricants.petro-canada.com](http://lubricants.petro-canada.com)  
Contact us: [lubecsr@hfsinclair.com](mailto:lubecsr@hfsinclair.com)

Committed to the disciplined operation of our business.



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