



## **LA 179 PREMIUM INDUSTRIAL PAES-SYN® BEARING GREASE**

NLGI-2 LB/GC

### **DESCRIPTION**

LA 179 is a unique formulated bearing grease for heavy industrial applications. Formulated and blended from PAES-SYN® base oils, synergistic lithium complex and incorporating exclusive TRILINIUM®, LA 179 provides high mechanical shear resistance of the grease and excellent wear protection of metal surfaces.

The applied characteristics of this lubricating grease ensure that it is an advanced lubricant available to industry.

### **EXTENDED OPERATION LIFE**

The inert saturated alkane chain structure of LA 179 is resistant to oil bleed separation and oxidation hardening whilst in storage and operation. Operational high temperatures do not induce oil bleed or oxygen uptake, thus conserving grease structure for long periods of operational use.

### **CORROSION RESISTANT**

A high resistance to rust and corrosion of metal surfaces from water, steam, diluted bases and acids is experienced with LA 179 due to the complex molecule structure. LA 179 is resistant to the acids formed by “mixed-greases” previously used in the equipment and is resistant to acids formed by contaminants in the operational environment. LA 179 is fortified with rust and corrosion inhibitors to protect metal surfaces of bearings, shafts and couplings and will not absorb condensation, moisture or water into the complex molecule structure.

### **ELASTOMISATION COMPATIBILITY**

LA 179 maintains seal elasticity and flexibility to effectively eliminate contamination ingress. In mining, steel mills, paper mills and chemical plants; dust, dirt, corrosive gases and liquids must be excluded from penetrating the lubricating grease and off metal surfaces. LA 179 resists oxidation from corrosive elements, therefore retaining grease consistency and protecting metals from corrosion and wear.

### **HIGH THERMAL CONDUCTIVITY AND ABSORPTION**

LA 179 rapidly absorbs and dissipates heat. Frictional heat can have a marked effect on the running efficiency of equipment and the ‘slump ability’ of the grease. Commodity greases tend to carbonise and enable ‘hot-spots’ to form on the interacting metal surfaces that develop irreparable wear areas. LA 179 performs in low and high temperature ranges. (-20°C to 260°C+) in both continuous and intermittent applications.

### **SUPERIOR LOAD CAPACITY**

LA 179 maintains a robust synergistic film and adhesion with boundary surfaces to resist squeeze-out and thinning from applied force and shock loading stress. Bearing and sliding surfaces operate under complete boundary and hydrodynamic coverage of opposing contact surfaces. Advantages to reduced frictional surfaces is considerably reduced metal wear and less energy consumption at start-up and run time.

## COMPATIBLE METAL TYPES

LA 179 has the versatility to be fully compatible and is ideal for application to the following metals and combinations of metals:

|           |           |        |          |         |        |         |        |
|-----------|-----------|--------|----------|---------|--------|---------|--------|
| Aluminium | Cast Iron | Nickel | Antimony | Copper  | Silver | Bismuth | Indium |
| Steel     | Bronze    | Iron   | Tin      | Cadmium | Lead   | Zinc    |        |

| FEATURES                                   | ADVANTAGES AND OPERATIONAL BENEFITS  |
|--|--|
| Thermal stability and oxidation resistance | Maintains consistency in storage and high heat operation   |
| High load carrying efficiency              | Protects metal surfaces under heavy loads due to synergistic grease adhering to metal surfaces under mechanical action of friction and anti-friction bearings. |
| Corrosion Resistant                        | Protects metal surfaces from acid and base working environments  |
| Wide temperature performance               | PARA-SYN base oil allows for cold climate flow with high temperature performance in direct and radiant   |
| Energy saving                              | Synergistic films provides increased co-efficient of friction to reduce drag in contact areas.   |
| Extended grease intervals                  | Increased productivity and safety due to reduced maintenance staff attendance  |
| Resistant to water wash-off                | Preferred application in high water environment to stay put where water ingress cannot be avoided  |

## APPLICATION

LA 179 can be used in both plain and anti-friction bearings, needle and sliding bearings, small gears, worm drives or as sealing grease for labyrinths. This lubricant has recorded in operating bearings, a reduction in temperature of >10°C when measured with a thermocouple instrument.



SPECIALISED LUBRICANTS

| TYPICAL TEST  | ASTM METHOD    | LA 179  |
|---|----------------|---|
| NLGI Grade  |                | 2   |
| Type  |                | Synthetic Ester/Synthetic Hydrocarbon Oil, Lithium Complex Soap |
| Appearance  |                | Red/Fleck/Smooth  |
| Penetration, worked @ 25°C, after 60 strokes                | D.217          | 275 - 285   |
| Mechanical Stability, 10,000 strokes, % change              | D.217          | -1.0  |
| Dropping Point, °C  | D.2265         | 289°  |
| Water washout at 80°C, % lost                               | D.1264         | <1.1  |
| Evaporation Loss, % @ 175°C, 22 hours                       | D.2595         | 3.9 (+/-)   |
| Bomb Oxidation, kPa drop, 100 hours<br>500 hours            | D.942          | 15 (max. 35)<br>60 (max. 105)                                   |
| Copper Corrosion Test                                       | D.4048         | 1B  |
| Timken OK Load, Kg  | D.2509         | >30   |
| 4-Ball EP, Weld, Kg/f<br>LWI, Kg/f                          | D.2596         | 710 min<br>65+  |
| 4-Ball Wear Scar, mm, min                                   | D.2266         | 0.42  |
| Roll Stability, 50% water, % change in penetration          | D.1831         | 2.3   |
| Rust Test   | D.1743         | Pass  |
| Lubrication Life, Bearing #204,<br>10,000 RPM, 163°C, hours | D.3336         | 125   |
| Ball Joint Test, Brine Sensitivity, Torque Stability        | D.3428-86      | Pass  |
| Temperature Range – Direct Thermal Heat                     | D.128          | -10°C to 260°C (+/-)  |
| Oil Separation, % loss                                      | D.1742         | 0.1   |
| Base Oil, cSt @ 40°C<br>cSt @ 100°C                         | D.445<br>D.445 | 192<br>19.3   |

This table gives typical properties (not specifications) based on historical production performance. Viscosity may vary within  $\pm 10\%$

**Health and Safety:** This product is not expected to cause health concerns when used for the intended application and according to the recommendations in the Material Safety Data Sheet (MSDS)