



# UNIREX N

## High Temperature Bearing Grease

### Product Description

UNIREX N greases are premium-quality, lithium-complex products suitable for high-temperature service in rolling-element bearings. These versatile greases can be used in a wide range of industrial applications and are particularly recommended for electric-motor lubrication. Unirex N 2 is an NLGI No. 2 grade and is preferred in most cases for application by hand packing or by grease gun. UNIREX N 3 is an NLGI No. 3 grade often used for special applications such as sealed-for-life electric motor bearings, vertically mounted bearings, and higher-speed applications. UNIREX N greases are not intended to be used under extreme pressure conditions where extra anti-welding properties are required. UNIREX N 2 meets the requirements of Lubricating Grease DIN 51825 - K2N - 20 and ISO L-XBDGB 2. UNIREX N 3 meets the requirements of Lubricating Grease DIN 51825 - K3N - 20 and ISO L-XBDGB 3.

### Features and Benefits

Unirex N greases exhibit excellent high and low temperature performance, resistance to water and corrosion, and long service life in a range of bearing applications.

| Features   | Advantages and Potential Benefits   |
|--|---|
| Excellent high-temperature performance           | Lithium-complex thickener resists softening / running out of bearings at temperatures up to 190°C   |
| Outstanding grease life                          | Laboratory bearing rig tests show outstanding performance at bearing temperatures exceeding 120°C   |
| Very good low-temperature characteristics        | Start-up power requirements are low at temperatures down to at least -29°C and may be suitable at temperatures down to -40°C in those applications where torque is not limiting. Meets DIN Flow Pressure requirements at -20°C. |
| Excellent mechanical stability                   | Exhibits excellent resistance to softening due to mechanical working  |
| Excellent water and corrosion resistance         | Resists water washout and protects bearings against corrosion   |
| Excellent performance in high-speed applications | Channeling characteristics provide excellent performance in high-speed deep-groove ball bearings. Unirex N3 is recommended where DmN (mean bearing diameter X rpm) exceeds 360,000.   |

### Applications

Because of their outstanding oxidation stability and resistance to softening at high temperatures, UNIREX N greases may be used in many applications such as oven-conveyor bearings, dryer-roller bearings, rotary steam joints, kiln-car bearings, induced-draft fan bearings, and equipment adjacent to high radiant heat such as ovens, soaking pits, etc. UNIREX N 2 is an NLGI No. 2 grade and is preferred in most cases for application by hand-packing or by grease gun. UNIREX N 2 is recommended for the lubrication of electric motors. It is suitable





for NEMA (National Electric Manufacturer's Association) Insulation Class A, B, and F motors. UNIREX N 3 is an NLGI No. 3 grade and is used for special applications such as sealed-for-life bearings, vertically-mounted bearings, and higher-speed bearings. Most of the uses for UNIREX N involve manual methods of application. Although UNIREX N 2 is suitable for use in automatic centralized systems, equipment served by these systems would normally not require the long-life properties of UNIREX N, since one of the functions of automatic systems is to replenish the lubricant at relatively short time intervals. UNIREX N 3 should not be used in such systems. Regardless of the level of oxidation stability of a grease, an increase in temperature will affect the rate of oxidation and thermal deterioration. Consequently, more frequent relubrication is required at higher temperatures. For UNIREX N greases, it is recommended that relubrication intervals not exceed one week of continuous service at 175°C. As temperatures approach 190°C, relubrication intervals should be daily or every shift. Relubrication intervals will, of course, vary widely with the type of service and should be based primarily on the recommendations of the motor manufacturer.

### Typical Properties

| Unirex N  | 2               | 3               |
|---|-----------------|-----------------|
| Thickener Type  | Lithium-complex | Lithium-complex |
| NLGI Grade  | 2               | 3               |
| Color, Visual   | Green           | Green           |
| Texture   | Smooth, Buttery | Smooth, Buttery |
| Dropping Point, ASTM D 2265, °C                             | 230             | 230             |
| Base Oil Viscosity, ASTM D 445, cSt @ 40°C                  | 115             | 115             |
| Base Oil Viscosity Index, ASTM D 2270                       | 95              | 95              |
| Penetration, worked 60 stokes, ASTM D 217, mm/10            | 280             | 235             |
| Penetration change after 100,000 strokes, ASTM D 217, mm/10 | 25              | 30              |
| Oil Separation, ASTM D 6184, mass % @ 100°C / 30 hrs        | 1.5             | 0.6             |
| EMCOR Corrosion , ASTM D 6138 (Distilled Water), rating     | 0,1             | 0,1             |
| Water Washout @ 79°C, ASTM D 1264, mass %                   | 3.7             | 3.5             |
| Grease life, DIN 51821 (FE-9), L50 hrs @ 140°C              | 448             | 283             |
| Grease life, DIN 51821 (FE-9), L50 hrs @ 160°C              | -               | 104             |
| Flow Pressure, DIN 51805, hPa @ -20°C                       | 900             | 1100            |

### Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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