# POLY-GUARD FDA

HIGH-PERFORMANCE NSF/USDA H1 FOOD GRADE OIL

Poly-Guard FDA is recommended for use in compressors, pumps, gear boxes, bearings, hydraulic systems, blowers or almost any other equipment in food processing or pharmaceutical plants requiring lubricating oil. These synthetic food-grade formulations offer superior wear protection, long service life, are NSF registered for H1 food grade service, meeting the FDA CFR Title 21 Section 178.3620(b) purity requirement, and ISO 21469 certified. Poly-Guard FDA reduces wear and keeps equipment cleaner, allowing for substantially longer oil drain intervals. Using Poly-Guard FDA saves money, minimizes inventory, reduces maintenance, improves equipment efficiency and extends equipment life. It is available in ISO viscosity grades 15 through 680. Poly-Guard FDA is an undyed product.

Synthetic oils enable Royal Purple to make superior FDA / NSF food grade lubricants, but it is Royal Purple's advanced Purolec additive technology that gives Royal Purple's lubricants their superior performance advantages. Purolec additive technology provides outstanding anti-wear properties while providing excellent rust and corrosion protection to all metals. Purolec additive technology also fortifies the oil against the detrimental effects of heat, which causes oil to oxidize

NSF

NonfoodC ompounds H1 Registered, ISO 21469 Certified

## PERFORMANCE ADVANTAGES

**SUPERIOR WEAR PROTECTION** - Protects bearings, compressors, pumps, and gears far beyond the ability of other food-grade lubricants

**EXCELLENT DEMULSIBILITY** - Rapidly and completely separates from water, which is easily drained from the bottom of the oil reservoir

**INCREASED EFFICIENCY** - Extremely low coefficient of friction reduces parasitic loss in equipment, saving energy over conventional oils

**OUTSTANDING OXIDATION RESISTANCE** – Greatly increases the useful life of the lubricant and resists varnish formation

**EXCELLENT CORROSION PROTECTION** – Forms an ionic bond on metal surfaces, which displaces water with rust inhibiting chemistry

**REDUCES BEARING VIBRATIONS** – Tough oil film along with an ability to micro-mend bearing surfaces provides superior bearing lubrication

**WIDE SEAL COMPATIBILITY RANGE** - Compatible with all materials commonly used in oils seals, such fluoroeleastomers, neoprene, Buna N (except high ACN), and silicone. It is not for use with EPDM or EPR elastomers.

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## TECHNICAL DATA

| Property | Test Method | 15 | 22 | 32 | 46 | 68 | 100 |
|---|---|---|---|---|---|---|---|
| **SAE Viscosity Grade** | SAE J300 | -- | SAE 8 | SAE 12 | SAE 20/SAE 80 | SAE 30/SAE 80 | SAE 40/SAE 90 |
| **ISO Viscosity Grade** | ISO 3448 | 15 | 22 | 32 | 46 | 68 | 100 |
| **Viscosity** @ 40°C, cSt | ASTM D445 | 15 | 22 | 32 | 46 | 68 | 100 |
| **Viscosity** @ 100°C, cSt | ASTM D445 | 3.5 | 4.5 | 6.1 | 7.9 | 10.4 | 13.6 |
| **Viscosity Index** | ASTM D2270 | 115 | 128 | 141 | 141 | 140 | 136 |
| **Specific Gravity** | ASTM D4052 | 0.826 | 0.830 | 0.835 | 0.840 | 0.846 | 0.853 |
| **Flash Point, °C (°F)** | ASTM D92 | 221 (430) | 193 (380) | 234 (454) | 249 (480) | 238 (460) | 234 (454) |
| **Pour Point, °C (°F)** | ASTM D97 | -67 (-85) | -57 (-71) | -39 (-38) | -39 (-38) | -39 (-38) | -39 (-38) |
| **Cu Corrosion, 3hr @ 100°C** | ASTM D130 | 1A | 1A | 1A | 1A | 1A | 1A |
| **Rust Preventing,** Fresh Water | ASTM D665A | PASS | PASS | PASS | PASS | PASS | PASS |
| **Rust Preventing,** Salt Water | ASTM D665B | PASS | PASS | PASS | PASS | PASS | PASS |
| **Demulsibility,** @130°F | ASTM D1401 | 40/40/0 (5) | 40/40/0 (10) | 40/40/0 (10) | 41/37/2 (10) | 41/39/0 (20) | -- |
| **Demulsibility,** @180°F | ASTM D1401 | -- | -- | -- | -- | -- | 40/40/0 (10) |
| **Foam Test,** Seq. II | ASTM D892 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |

| Property | Test Method | 150 | 220 | 320 | 460 | 680 |
|---|---|---|---|---|---|---|
| **SAE Viscosity Grade** | SAE J300 | SAE 50/SAE 90 | SAE 60/SAE 110 | SAE 140 | SAE 190 | SAE 250 |
| **ISO Viscosity Grade** | ISO 3448 | 150 | 220 | 320 | 460 | 680 |
| **Viscosity** @ 40°C, cSt | ASTM D445 | 150 | 220 | 320 | 460 | 680 |
| **Viscosity** @ 100°C, cSt | ASTM D445 | 17.1 | 23.2 | 30.4 | 38.2 | 49.4 |
| **Viscosity Index** | ASTM D2270 | 128 | 124 | 125 | 125 | 124 |
| **Specific Gravity** | ASTM D4052 | 0.859 | 0.864 | 0.869 | 0.874 | 0.878 |
| **Flash Point, °C (°F)** | ASTM D92 | 234 (454) | 229 (444) | 226 (440) | 229 (444) | 221 (430) |
| **Pour Point, °C (°F)** | ASTM D97 | -39 (-38) | -42 (-44) | -42 (-44) | -39 (-38) | -36 (-33) |
| **Cu Corrosion, 3hr @ 100°C** | ASTM D130 | 1A | 1A | 1A | 1A | 1A |
| **Rust Preventing,** Fresh Water | ASTM D665A | PASS | PASS | PASS | PASS | PASS |
| **Rust Preventing,** Salt Water | ASTM D665B | PASS | PASS | PASS | PASS | PASS |
| **Demulsibility,** @130°F | ASTM D1401 | -- | -- | -- | -- | -- |
| **Demulsibility,** @180°F | ASTM D1401 | 41/39/0 (10) | 40/38/2 (10) | 40/40/0 (20) | 41/39/0 (20) | 40/40/0 (25) |
| **Foam Test,** Seq. II | ASTM D892 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |

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