

Next Generation Compressor Fluids

COMPRESYN[®] 545 SERIES

Food-Grade Synthetic Air Compressor/Vacuum Pump Oils

Product Description

COMPRESYN[®] 545 Series Compressor and Vacuum Pump fluids are our premium, patented lubricants (Patent # US8, 183, 188 B2) for use in a variety of air compressor and vacuum pump equipment and critical applications. Critical performance features include low fluid volatility, enhanced water demulsibility, superior hydrolytic stability, improved sealing effect, reduced friction, enhanced wear protection, and superior fluid dispersing characteristics to eliminate “sludging” and deposit-forming tendencies.

COMPRESYN[®] 545 Series Compressor and Vacuum Pump oils are fully compliant with 21 CFR 178.3570 and meets the requirements of USDA/NSF H1 (Lubricants with Incidental Food Contact).

Performance

COMPRESYN[®] 545 Series lubricants are compounded with a blend of next-generation, 100% food-grade synthetic base oils and advanced additive technologies to provide superior performance over competitive lubricating oils. Our patented formulations, based on extensive research and development coupled with field trial experience, provide COMPRESYN[®] 545 fluids with an optimized combination of antiwear agents, rust inhibitors, and antioxidants that demonstrates a synergistic performance advantage over traditional air compressor/vacuum pump oils.

Base Fluid Advantages

The food-grade alkylated synthetic base fluid utilized in COMPRESYN[®] 545 provides several benefits over conventional synthetic base fluids such as polyalphaolefins (PAOs) and esters. While PAOs handle heat and oxidation better than mineral oil, they are essentially synthesized paraffinic oils in performance and are subject to abrasive carbonization and depositing in equipment components. Additionally, they provide no dispersancy or solvency to the lubricant to prevent agglomeration (depositing) of ingested materials.

Esters, while possessing solvency and dispersing characteristics which are beneficial in the application, suffer from hydrolytic instabilities. Water entrained in the lubricant can cause the ester to hydrolyze, breaking down the ester into component products such as acids and alcohols which can varnish components and lead to premature failure.

The synthetic alkylated naphthalenes used in COMPRESYN[®] 545 provide solvency and dispersing characteristics similar to esters but do not suffer from hydrolytic instability. Additionally, they do not form abrasive deposits such as those formed by mineral oils and PAOs.

Wear Protection

COMPRESYN[®] 545 Series have been specifically formulated to provide enhanced wear protection. Studies have shown that the additive chemistry in COMPRESYN[®] 545 Series significantly reduces wear over conventional oils, dramatically increasing component life.

Thermal and Oxidative Stability

COMPRESYN[®] 545 Series outperforms both synthetic and conventional fluids in thermal and oxidative stability, as demonstrated by the Rotating Pressure Vessel Oxidation Test (ASTM D 2272). This enhanced performance translates into longer drain intervals, trouble-free operation and increased resistance to varnishing.

Water Separation and Air Entrainment

COMPRESYN[®] 545 Series readily separates from water and air, eliminating emulsions that inhibit the oil’s ability to lubricate, decreasing the potential for forming deposits, and improving efficiency. Rapid water separation ensures easy drainage from the sump, reducing the potential for rust and corrosion of the system components.

Application Recommendation

COMPRESYN[®] 545 Series may be used 8000-10,000+ hours for many compressor applications, subject to operating conditions and maintenance practices. Monitoring by oil analysis at 500-hour intervals is recommended. [Where discharge temperature exceeds 205°F (96°C), lubricant life expectancy is reduced.]

Typical Data

COMPRESYN® 545 Series

| Property | ISO 32 | ISO 46 | ISO 68 | ISO 100 | ISO 150 | Method |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-------------|
| Viscosity at 40°C, cSt | 32.8 | 46.7 | 65.5 | 97.4 | 148.2 | ASTM D 445 |
| Viscosity at 100°C, cSt | 5.45 | 6.85 | 8.8 | 11.4 | 17.3 | ASTM D 445 |
| Viscosity Index | 101 | 101 | 108 | 104 | 127 | ASTM D 2270 |
| RPVOT, minutes | 2840 | 2821 | 2754 | 2066 | 2994 | ASTM D 2272 |
| Flash Point, °F (°C) | 432 (222) | 471 (244) | 478 (248) | 500 (260) | 539 (282) | ASTM D 92 |
| Fire Point, °F (°C) | 471 (244) | 507 (264) | 529 (276) | 554 (290) | 572 (300) | ASTM D 92 |
| Pour Point, °F (°C) | -62 (-52) | -62 (-52) | -47 (-44) | -40 (-40) | -45 (-43) | ASTM D 97 |
| Specific Gravity | 0.8973 | 0.8717 | 0.8860 | 0.8855 | 0.8729 | ASTM D 1298 |
| Density, lbs/gallon | 7.472 | 7.260 | 7.378 | 7.373 | 7.269 | ASTM D 1298 |
| NSF Reg. No./Category Code | | 145468/H1 | | 145469/H1 | | |

Performance Features:

- Outstanding Antiwear Protection for Pump Protection
- Resists the Formation of Foam, Sludge, Varnish and Corrosive Acids
- Superior Rust and Oxidation Stability for Long, Trouble-Free Life
- Hydrolytically Stable and Readily Separates from Water
- Superior Dispersing Characteristics for Extending Drain Intervals

Meets Performance Requirements:

- USDA/NSF H1 Compliant
- Kosher and Parve Certified
- Compliant with FDA 21 CFR 178.3570 — “Lubricants with Incidental Food Contact”

Micronox® Technology

COMPRESYN® 545 Series fluids contain the performance benefits of Micronox® Technology that provides antimicrobial protection to the lubricant. A first in food-grade lubricants, Micronox® has proven effective in protecting the lubricant against microbial contamination over extended lubrication intervals and is NSF-registered HX1 (Ingredients for use in H1 Lubricants).

| Part Numbers | ISO 32 | ISO 46 | ISO 68 | ISO 100 | ISO 150 |
|--------------|------------|-------------|------------|------------|------------|
| 275 Gal Tote | CS545H-275 | CS545J--275 | CS545K-275 | CS545L-275 | CS545M-275 |
| 55 Gal Drum | CS545H-055 | CS545J-055 | CS545K-055 | CS545L-055 | CS545M-055 |
| 16 Gal Keg | CS545H-016 | CS545J-016 | CS545K-016 | CS545L-016 | CS545M-016 |
| 5 Gal Pail | CS545H-005 | CS545J-005 | CS545K-005 | CS545L-005 | CS545M-005 |
| 4-1 Gal Case | CS545H-004 | CS545J-004 | CS545K-004 | CS545L-004 | CS545M-004 |
| Bulk | CS545H | CS545J | CS545K | CS545L | CS545M |