



## FUTERRA™ COMPRESSOR OILS

### High Stability, Fully Synthetic Compressor Oils

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FUTERRA™ compressor oils are highly engineered lubricants formulated with high stability fully synthetic base oils and advanced ashless additive packages. FUTERRA™ compressor oils are formulated to provide excellent lubricating qualities for many air compressors, including portable and stationary rotary and screw compressors as well as single-stage, two-stage, and multistage reciprocating compressors.

FUTERRA™ compressor oils are both hydrolytically and oxidatively stable, inherently biodegradable and offer synthetic, renewable resource-based base oils with carbon reduction benefits and longer drain intervals when compared to conventional mineral and PAO base oils.

FUTERRA™ compressor oils protect against rust, oxidation, foaming, and have ashless antiwear properties.

FUTERRA™ compressor oils offer value and performance through:

- Low deposit formation for longer machinery life
- Exceptional stability that extends lubricant life
- Longer drain intervals without compromising performance and reduces total cost of ownership
- Minimal maintenance and downtime due to higher stability and longer performance over equipment lifetime
- Inherently biodegradable and offers carbon reduction benefits due to high degree of renewable resource-based components
- Low volatility and excellent air release minimizes oil loss and decreases need for makeup oil

Since reciprocating compressors require both crankcase lubricant and cylinder lubricant, FUTERRA™ compressor oils are specifically formulated to meet this dual requirement.

While compressor manufacturer recommendations may vary, the ISO 68 grade is commonly specified for rotary air compressors, while the ISO 100 grade is preferred for reciprocating air compressors.

FUTERRA™ compressor oils are compatible with seals specified for use with mineral or PAO oil type compressor oils.

FUTERRA™ compressor oils should not be used for air compressors used in breathing air applications and should not be used in compressors where the discharge temperature is higher than the compressor oil flash point.

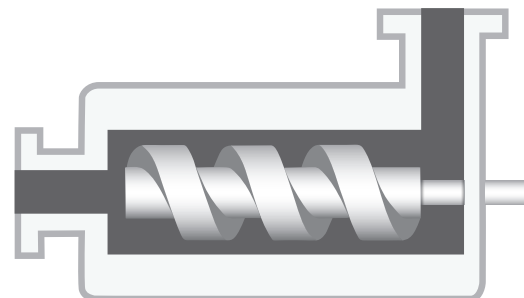
| Typical Properties  | FUTERRA™ COMPRESSOR OILS |             |               |               |                 |
|---|--------------------------|-------------|---------------|---------------|-----------------|
|   | FUTERRA™ Product         | Test Method | ISO 46        | ISO 68        | ISO 100         |
| ISO Viscosity Grade   |                          | ISO 3448    | ISO 46        | ISO 68        | ISO 100         |
| Kinematic Viscosity at 40°C                                     |                          | ASTM D445   | 45.32         | 72.56         | 101.34          |
| Kinematic Viscosity at 100°C                                    |                          | ASTM D445   | 7.88          | 11.33         | 14.64           |
| Viscosity Index   |                          | ASTM D2270  | 145           | 149           | 148             |
| Flash Point in Cleveland Open Cup, °C                           |                          | ASTM D92    | 275           | 282           | 277             |
| Pour Point, °C  |                          | ASTM D97    | -43           | -45           | -45             |
| Specific Gravity  |                          | ASTM D4052  | 0.820         | 0.832         | 0.834           |
| Copper Strip Corrosion  |                          | ASTM D130   | 1b            | 1a            | 1a              |
| Rust Prevention, Distilled Water                                |                          | ASTM D665A  | PASS          | PASS          | PASS            |
| Rust Prevention, Synthetic Sea Water                            |                          | ASTM D665B  | PASS          | PASS          | PASS            |
| Foaming, Sequences I, II, III (Tendency/Stability), milliliters |                          | ASTM D892   | 0/0, 0/0, 0/0 | 0/0, 0/0, 0/0 | 10/0, 10/0, 5/0 |
| Air Release, minutes  |                          | ASTM D3427  | < 1           | 4.5           | 4.5             |
| Water Separability, minutes                                     |                          | ASTM D1401  | 10            | 5             | 4               |
| Rotating Pressure Vessel Oxidation Test (RPVOT), minutes        |                          | ASTM D2272  | 2162          | 2200          | 2994            |

Properties in the table above are typical of those obtained with normal production tolerances and do not constitute a product specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local RSC Bio Solutions contact or visit [www.rscbio.com](http://www.rscbio.com).

Service intervals depend on (1) clean ambient conditions, (2) filter and separator changes as required in compressor service and operating manual, and (3) "normal" compressor temperature conditions. Laboratory analysis of compressor fluids should be used to determine lubricant service life.

## OEM Approvals

FUTERRA™ compressor oils meet the requirements of DIN 51506 VDL standard and the OEM requirements of MacGregor / HATLAPA compressors.



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