



# AMSAIR



## SYNTHETIC ROTARY COMPRESSOR OIL

## Data Sheet

AMSOIL Industrial **AMSAIR** is engineered to provide excellent all-temperature wear protection and long oil life in single- and multi-stage rotary screw, vane and centrifugal compressor crankcases and cylinders, single-stage vacuum pumps and blowers.

### Product Benefits

- **Up to 8,000-hour service** in rotary screw compressors.
- Resists oxidation to inhibit sludge, carbon and varnish deposits.
- Superior cold-temperature startup and operating efficiency.
- Excellent anti-wear protection helps extend equipment life.
- Inhibits foam to reduce oil consumption and minimize top-offs.
- High demulsibility helps protect against rust and corrosion.

### Applications

Use AMSOIL Industrial **AMSAIR** in single- and multi-stage rotary screw and vane compressors, single-stage vacuum pumps and other compressor applications. Oil life up to 8,000 hours is expected under normal operating conditions in rotary screw compressors. Service life is dependent on operating conditions and maintenance practices – regular oil analysis is recommended. Compatible with mineral oils and most synthetic oils, seals, paints and materials. Consult an AMSOIL Industrial Application Engineer to identify the best solutions for your specific applications.

### Typical Technical Properties\*

AMSOIL Industrial **AMSAIR** Synthetic Rotary Compressor Oil

| Test                                      | Method     | ISO 32        | ISO 46        | ISO 68        |
|-------------------------------------------|------------|---------------|---------------|---------------|
| Stock Code                                | —          | CRV32AA       | CRV46AA       | CRV68AA       |
| ISO Viscosity Grade                       | ASTM D2422 | 32            | 46            | 68            |
| Kinematic Viscosity, 100°C, cSt           | ASTM D445  | 6.1           | 7.4           | 10.2          |
| Kinematic Viscosity, 40°C, cSt            | ASTM D445  | 32.1          | 43.7          | 67.1          |
| Viscosity Index                           | ASTM D2270 | 139           | 132           | 138           |
| Flash Point, °C (°F)                      | ASTM D92   | 252 (486)     | 262 (504)     | 262 (504)     |
| Fire Point, °C (°F)                       | ASTM D92   | 270 (518)     | 284 (543)     | 282 (540)     |
| Pour Point, °C (°F)                       | ASTM D97   | -40 (-40)     | -38 (-36)     | -38 (-36)     |
| Four-Ball Wear, scar, mm                  | ASTM D4172 |               |               |               |
| 75°C, 1200 rpm, 40 kg, 1 hr               |            | 0.41          | 0.41          | 0.41          |
| TAN                                       | ASTM D664  | 0.29          | 0.29          | 0.29          |
| Demulsibility                             | ASTM D1401 | 40-40-0 (15)  | 40-40-0 (10)  | 40-40-0 (15)  |
| Foam Characteristics, ml, seq. I, II, III | ASTM D892  | 0/0, 0/0, 0/0 | 0/0, 0/0, 0/0 | 0/0, 0/0, 0/0 |
| Copper Corrosion, 121°C, 3 hr             | ASTM D130  | 1A            | 1A            | 1A            |
| Color                                     | ASTM D1500 | L0.5          | L0.5          | L0.5          |

## Varnish Resistance

Varnish can be a major problem in rotary screw compressors, especially in high-heat applications. Varnish-related mechanical breakdowns reduce efficiency and waste resources. To analyze high-temperature performance, a leading competitor synthetic ISO 46 rotary compressor oil and AMSOIL Industrial **AMSAIR 46** were run in industrial rotary screw compressors with oil discharge temperatures of 200°F.

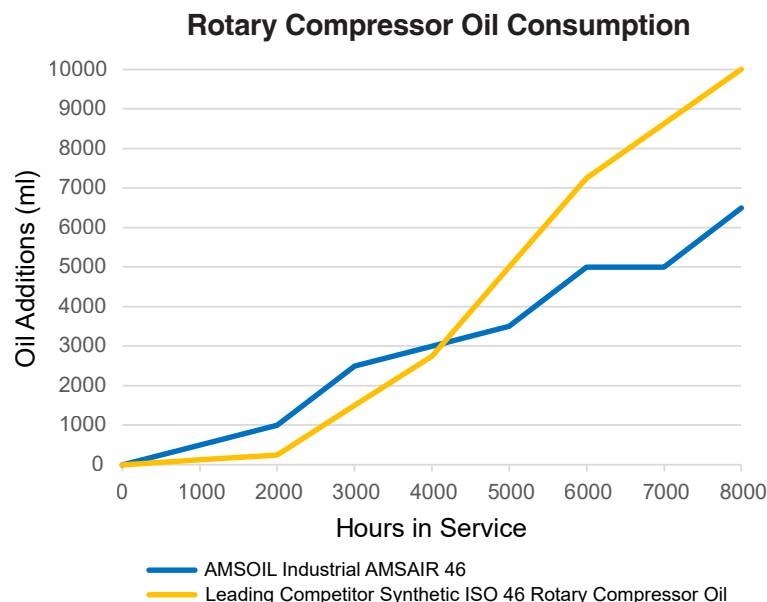
After only 6,228 hours of service, the competing compressor oil showed critical varnish potential, while **AMSAIR 46** showed ultra-low varnish potential after 8,000 hours. To prove performance at extreme temperatures, **AMSAIR 46** was run in a third test for 8,000 hours at an oil discharge temperature of 215°F.

The Membrane Patch Colorimetry (MPC) Varnish Potential Test (ASTM D7843) determines a lubricant's propensity to form varnish. The lubricant is filtered through a patch and the resulting color is measured against a control patch. The darker the patch, the higher the potential for damaging varnish. In this assessment, **AMSAIR 46** showed minimal varnish potential at both 200°F and 215°F, **indicating superior resistance to varnish.**



## Oil Consumption

Excessive oil consumption requires frequent top-offs, wasting time and resources. To analyze oil consumption, a leading competitor synthetic ISO 46 rotary compressor oil and AMSOIL Industrial **AMSAIR 46** were each run for 8,000 hours in an industrial rotary screw compressor under the same operating conditions. The results were compared to determine the amount of oil added over 8,000 hours of run time. The excellent foam resistance and air-release properties of **AMSAIR 46** helped reduce oil consumption, **requiring 35% less top-off oil than the leading competitor's oil.**



## Health & Safety Information

For recommendations on safe handling and use, refer to the Safety Data Sheet (SDS) available at [AMSOILIndustrial.com](http://AMSOILIndustrial.com) or upon request at [IndustrialSalesGroup@amsoil.com](mailto:IndustrialSalesGroup@amsoil.com) or (715) 399-6305.

*\*Technical properties are general characteristics of the product and not manufacturing specifications. Variations that do not affect product performance should be expected. Product formulations are subject to change without notice. Customers are responsible for determining product suitability for use with their equipment.*