The First in Synthetics®

RC Series Synthetic R&O/AW Gear and Bearing Oils

PRODUCT DESCRIPTION

AMSOIL Synthetic RC Series R&O/AW Gear and Bearing Oils are formulated with high-quality synthetic base stocks and additive systems that effectively reduce wear and protect equipment by maintaining viscosity, resisting thermal and oxidative breakdown, inhibiting rust and resisting the degrading effects of water.

Viscosity Characteristics

AMSOIL RC Series Oils are very shear-stable and oxidation-resistant, helping prevent viscosity loss from mechanical shear and viscosity increase from oxidation. RC Series Oils remain fluid at cold temperatures, providing easier startups, quick lubrication circulation and limiting the need for sump heaters. At higher temperatures, RC Series Oils maintain a thick lubricating film, reducing metal-to-metal contact and component wear.

Additive Performance

AMSOIL RC Series Oils are formulated with complete additive technology to enhance performance. Non-detergent, ashless anti-wear additives provide an additional layer of protection against wear in severe conditions, rust inhibitors protect critical components against corrosion in the presence of water or process contaminants, antioxidants increase oxidation resistance and extend lubricant life and foam suppressants prevent foaming and air entrapment.

Water Resistant

RC Series Oils provide hydrolytic stability (stability in the presence of water) and demulsibility (ability to separate from water), increasing lubricant life, helping prevent oil/water emulsions and allowing reservoirs to be drained of water.

Performance Features

- Extended oil drain intervals and equipment life
- Yellow metals compatible
- Resistant to high-temperature oxidation
- Formulated with anti-wear, anti-rust and anti-foam additives
- Excellent cold-temperature performance
- Readily separate from water

Application Recommendation

AMSOIL Synthetic RC Series Oils are primarily recommended for gear and bearing applications and circulating systems requiring R&O and/or anti-wear additive technology.

The lighter viscosity RC Series Oils (RCF, RCH) provide superior protection in high- and low-pressure gear, vane and piston hydraulic systems, compressors, high-speed bearings, small gear sets, pumps, high-speed spindles, high-speed gears and many other industrial applications. Higher viscosity RC Series Oils, beginning with RCI (ISO 46), meet AGMA specifications for R&O and synthetic gear oil specifications 1 through 8, respectively, for the lubrication of intermediate-speed equipment where mild shock-loading and intermittent service are involved. These applications include machine tools, roller chains, gear reducers, cone drives, large motor bearings, medium-speed ball and roller bearings, blowers and worm gear sets. **Consult the manufacturer for proper viscosity recommendations. The ability of RC Series Oils to extend drain intervals is subject to operating conditions and maintenance practices and should be monitored by oil analysis.**

Although AMSOIL lubricants are compatible with mineral oil-based lubricants, for optimum performance it is recommended that the system be thoroughly drained and cleaned, if warranted.

Note: AMSOIL RC Series Oils are not designed for applications requiring extreme-pressure (EP) agents. For EP-fortified lubricants, refer to AMSOIL SG Series Gear Oils.

TYPICAL TECHNICAL PROPERTIES

Synthetic RC Series Circulating Oils	RCF	RCG	RCH	RCI	RCJ	RCK	RCL	RCM	RCN	RCO	RCP	RCQ*
ISO VG — ASTM D-2422	ISO 15	ISO 22	ISO 32	ISO 46	ISO 68	ISO 100	ISO 150	ISO 220	ISO 320	ISO 460	ISO 680	ISO 1000
R&O Gear Oil Classification	—	—	0	1	2	3	4	5	6	7	8	—
AGMA Synthetic Gear Oil Classification	—	—	0S	1S	2S	3S	4S	5S	6S	7S	—	—
VK 100°C — ASTM D-445	3.6	4.7	6.2	7.6	10.3	13.6	19.4	25.6	33.8	44.5	59.9	79.8
VK 40°C — ASTM D-445	15.1	22.1	33.1	43.7	67.8	100.5	154.9	226.6	330.3	470.9	705.6	1030.4
Viscosity Index ASTM D-2270	123	130	137	142	138	136	144	144	144	148	150	154
Flash Point °C (°F) ASTM D-92	209 (408)	237 (459)	264 (507)	257 (495)	258 (496)	264 (507)	274 (525)	276 (529)	276 (529)	281 (538)	284 (543)	278 (532)
Fire Point °C (°F) ASTM D-92	227 (441)	265 (509)	278 (532)	272 (522)	274 (525)	276 (529)	296 (565)	296 (565)	300 (572)	302 (576)	296 (565)	298 (568)
Pour Point °C (°F) ASTM D-97	-68 (-90)	-68 (-90)	-53 (-63)	-50 (-58)	-48 (-54)	-45 (-49)	-40 (-40)	-40 (-40)	-36 (-33)	-30 (-22)	-28 (-18)	-23 (-9)
Noack — ASTM D-5800	18.4%	7.4%	3.8%	4.2%	3.0%	2.8%	4.0%	3.6%	3.3%	3.6%	3.6%	3.4%
Four-Ball Wear Test — ASTM D-4172 Mod. (40 kg, 1200 rpm, 75°C, 60 min.)	0.50	0.50	0.45	0.45	0.45	0.45	0.37	0.37	0.37	0.37	0.37	0.37
Copper Strip Corrosion Test ASTM D-130 — Mod. (250°F, 3 hr.)	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
Rust Tests ASTM D-665A&B (freshwater & synthetic seawater)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Foam, ml, (ASTM D-892) Sequence I, II, III Test End and After 10 minutes settling —	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0

APPLICATIONS

The appropriate viscosities of AMSOIL RC Series Oils meet or exceed the following hydraulic oil applications or requirements:

- Denison HF-0, HF-1 and HF-2
- Vickers M-2950-S and I-286-S
- Cincinnati Milacron P-68, P-69 and P-70
- U.S. Steel 127 and 136
- Ford M-6C32
- GM LH-04-1, LH-06-1 and LH-15-1
- Lee Norse 100-1
- Jeffrey No. 87
- BF Goodrich 0152
- Commercial Hydraulics
- AGMA R&O Synthetic Gear Oil specifications

AMSOIL Product Warranty

AMSOIL industrial lubricants are formulated to exceed accepted industry specifications. AMSOIL warrants that the use of its lubricants will not cause mechanical damage to any mechanically-sound equipment when AMSOIL products are used in full compliance with the company's recommendations. However, the purchaser of these lubricants is responsible for determining if these specifications are adequate and proper for the intended application. The AMSOIL warranty is limited to lubricant performance consistent with indicated specifications. No additional warranty, expressed or implied, can be made.

*Call for availability.

AMSOIL Industrial Synthetic Lubricants and Dealership information are available from your AMSOIL Industrial Dealer or AMSOIL INC.

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