"The First in Synthetics"®

Industrial
Synthetic Lubricants

SYNTHETIC
RC SERIES
R&O/AW GEAR AND BEARING OILS

PRODUCT DESCRIPTION

AMSOIL's RC Series lubricants are made from high quality synthetic base stocks and additive systems. This product prevents wear and protects equipment by maintaining its viscosity, resisting thermal and oxidative breakdown, incorporating anti-wear additives, preventing rust, and resisting the degrading effects of water.

Viscosity Characteristics

AMSOIL lubricants are very shear-stable and oxidation-resistant, which prevents viscosity loss from mechanical shear and viscosity increase from oxidation. In addition, the high viscosity index and low pour points allow for extended temperature protection and performance. AMSOIL RC Series oils are fluid at cold temperatures—providing easier startups, quick lubricant circulation and limiting the need for sump heaters. At higher temperatures, AMSOIL maintains a thick lubricating film, reducing metal-to-metal contact and component wear.

Additive Performance

AMSOIL's complete additive technology enhances the oil's performance. The non-detergent, ashless anti-wear additives in the RC Series 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, anti-oxidants increase the oil's oxidation resistance, which extends lubricant life, and the foam suppressants prevent unwanted foaming and air entrapment.

Water Resistant

Hydrolytic stability (stability in the presence of water) and demulsibility (ability to readily separate from water) are important features provided by the RC Series lubricants. This increases lubricant life, prevents oil/water emulsions, and allows for reservoirs to be drained of water caused by the environment, processes or condensation.

AMSOIL's unique combination of synthetic base oils and additives extends service life and operating temperatures while providing clean, problem-free operation.

PERFORMANCE FEATURES

- Long life / Extended drains
- Thermally stable / Yellow metals compatible
- Anti-wear / Anti-foam fortified
- Anti-rust / Anti-oxidation additives
- Cold temperature performance
- Meets AGMA R&O and Synthetic Gear Oil classifications
- Hydrolytically stable and readily separates from water

APPROPRIATE VISCOSITIES 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

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 AMSOIL RC Series oils 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 grades of RC 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 environments 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, please 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
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
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	4.55	6.11	6.39	8.29	11.44	15.44	20.73	26.99	34.99	39.68	53.73
VK 40°C — ASTM D-445	15.23	22.30	31.97	45.47	69.88	97.52	149.32	215.28	315.07	432.26	656.86
Viscosity Index ASTM D-2270	244	247	157	159	158	168	162	160	156	140	141
SPGR — ASTM D-1298	0.8338	0.8388	0.8493	0.8576	0.8681	0.8735	0.8816	0.8877	0.8911	0.8996	0.9047
Density — ASTM D-1298	6.944	6.986	7.072	7.141	7.228	7.273	7.341	7.392	7.420	7.491	7.534
Flash Point °C (°F) ASTM D-92	172 (342)	180 (356)	242 (468)	246 (475)	250 (482)	246 (475)	248 (478)	254 (489)	252 (486)	256 (493)	252 (485)
Fire Point °C (°F) ASTM D-92	184 (363)	192 (378)	262 (504)	266 (511)	270 (518)	264 (507)	264 (507)	262 (504)	260 (500)	272 (522)	274 (525)
Pour Point °C (°F) ASTM D-97	-61 (78)	-61 (-78)	-54 (-65)	-50 (-58)	-50 (-58)	-45 (-49)	-45 (-49)	-42 (-44)	-38 (-36)	-33 (-27)	-24 (-11)
Noack — DIN 51581	NA	NA	9.04%	7.18%	6.64%	7.75%	7.76%	7.31%	7.11%	6.30%	5.20%
Four-Ball Wear Test — ASTM D-4172 Mod. (40 kg, 1200 rpm, 75°C, 60 min.)	0.48	0.45	0.41	0.37	0.37	0.35	0.35	0.33	0.33	0.33	0.33
Copper Strip Corrosion Test ASTM D-130 —Mod. (250°F, 3 hr.)	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
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

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.

AMSOIL PRODUCT AVAILABILITY

AMSOIL products are available in 5-gallon pails, 55-gallon drums, 275-gallon totes and bulk quantities. For 275-gallon totes, please allow two to four weeks for delivery.

AMSOIL Industrial Lubricants are stocked in Superior, Wisconsin and in select regional distribution centers throughout the United States and Canada. AMSOIL will stock additional quantities of lubricants or special order products based on customer requests and regional demands.

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