



*The First in Synthetics®*

## **Industrial Synthetic Lubricants**

### **PRODUCT DESCRIPTION**

AMSOIL 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 antiwear 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 RC Series oils are formulated with complete additive technology, enhancing performance. The nondetergent, ashless antiwear 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, antioxidants 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 RC Series oils make use of a unique combination of synthetic base oils and additives to extend service life and provide clean, problem-free operation.

### **PERFORMANCE FEATURES**

- Long life / Extended drains
- Thermally stable / Yellow metals compatible
- Antiwear / Antifoam fortified
- Antirust / Antioxidation additives
- Cold temperature performance
- Meets AGMA R&O and Synthetic Gear Oil classifications
- Hydrolytically stable and readily separates from water

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

### **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 antiwear additive technology.

RCE is a clear, nonstaining oil with an ISO-10 viscosity designed for high-speed spindles such as those found in textile applications.

The lighter viscosity AMSOIL 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 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

<b>Synthetic RC Series Circulating Oils</b>	<b>RCE</b>	<b>RCF</b>	<b>RCG</b>	<b>RCH</b>	<b>RCI</b>	<b>RCJ</b>	<b>RCK</b>	<b>RCL</b>	<b>RCM</b>	<b>RCN</b>	<b>RCO</b>	<b>RCP</b>
ISO VG — ASTM D-2422	<b>ISO 10</b>	<b>ISO 15</b>	<b>ISO 22</b>	<b>ISO 32</b>	<b>ISO 46</b>	<b>ISO 68</b>	<b>ISO 100</b>	<b>ISO 150</b>	<b>ISO 220</b>	<b>ISO 320</b>	<b>ISO 460</b>	<b>ISO 680</b>
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	2.9	3.6	4.7	5.8	7.8	10.3	13.5	17.6	23.5	31.1	40.3	53.5
VK 40°C — ASTM D-445	10.7	15.1	22.1	30.8	47.2	68.2	102.3	147.9	220.8	329.2	478.6	705.7
Viscosity Index ASTM D-2270	115	123	130	131	132	137	132	131	132	131	130	133
Flash Point °C (°F) ASTM D-92	187 (369)	209 (408)	237 (459)	264 (507)	258 (496)	262 (504)	264 (507)	276 (529)	272 (522)	288 (550)	276 (529)	284 (543)
Fire Point °C (°F) ASTM D-92	197 (387)	227 (441)	265 (509)	276 (529)	276 (529)	278 (532)	278 (532)	294 (561)	299 (570)	307 (585)	302 (576)	317 (603)
Pour Point °C (°F) ASTM D-97	-68 (-90)	-68 (-90)	-68 (-90)	-54 (-65)	-51 (-60)	-48 (-54)	-45 (-49)	-43 (-45)	-40 (-40)	-37 (-35)	-34 (-29)	-33 (-27)
Noack — ASTM D-5800	NA	18.4%	7.4%	5.7%	5.0%	5.4%	5.1%	2.8%	2.9%	2.7%	1.7%	2.5%
Four-Ball Wear Test — ASTM D-4172 Mod. (40 kg, 1200 rpm, 75°C, 60 min.)	0.60	0.50	0.50	0.45	0.45	0.45	0.40	0.35	0.35	0.35	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	1A
Rust Tests ASTM D-665A&B (freshwater & synthetic seawater)	NA	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

### 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.

