

## Compressor Oil

# AMSOIL ISO 68 100% SYNTHETIC COMPRESSOR OIL

Product Code: PCJ05-EA



## Product Description

AMSOIL PC Series ISO 68 Synthetic Compressor Oil delivers up to 8,000 hours of service life in rotary screw, rotary vane, centrifugal and reciprocating compressors, cutting maintenance frequency and waste oil disposal costs compared to conventional petroleum compressor oils. It is built on thermally stable synthetic base oils and fortified with non-detergent additives engineered for continuous high-temperature operation.

Compressors operate under punishing conditions. Discharge temperatures routinely reach 200 degF or higher, accelerating oxidation that thickens oil, deposits varnish on internal surfaces and generates acids that corrode metal components. Moisture from compressed air condensation compounds the problem, forming emulsions that promote rust. Petroleum-based compressor oils break down quickly in this environment, leading to short drain intervals, unplanned downtime and expensive repairs.

### SUPERIOR VARNISH RESISTANCE

Varnish buildup is one of the most common causes of compressor inefficiency and mechanical failure. In head-to-head testing, a leading competitor's ISO 46 synthetic compressor oil reached critical varnish potential after only 6,228 hours at 200 degF discharge temperature, as measured by the Membrane Patch Colorimetry Test (ASTM D7843). AMSOIL PC Series Synthetic Compressor Oil continued to show ultra-low varnish potential after a full 8,000 hours under the same conditions. That resistance to varnish formation translates directly to cleaner valve plates, cooler operating temperatures and fewer service interruptions in industrial rotary screw compressor applications.

### REDUCED OIL CONSUMPTION

Frequent top-offs waste time and lubricant. In an 8,000-hour side-by-side comparison run in an industrial rotary screw compressor under identical operating conditions, AMSOIL PC Series required 35% less top-off oil than the leading competitor's synthetic compressor oil. The excellent foam resistance and air-release properties of the PC Series formulation keep oil where it belongs rather than allowing it to be carried out with discharged air.

### CONTROLS FOAM AND REDUCES WEAR

Foam in a compressor oil increases heat, accelerates oxidation and starves contact surfaces of lubrication. AMSOIL PC Series Synthetic Compressor Oil is formulated with anti-foam additives and delivers 0/0 foam results across all three sequences of ASTM D892 testing. Unlike some competing compressor oils, the PC Series is also anti-wear fortified. Four-Ball Wear Test results (ASTM D4172) show a 0.41mm wear scar at 40 kg load, protecting high-contact regions in vanes, screws and bearings.

### RESISTS WATER CONTAMINATION

Water is unavoidable in compressed air systems. AMSOIL PC Series Oil is hydrolytically stable and separates rapidly from water, achieving complete demulsibility (40/40/0) in just 15 minutes per ASTM D1401 testing. Once separated, water can be easily drained

from the sump. The formulation is also anti-rust fortified, passing both fresh water and synthetic sea water rust tests per ASTM D665 A and B.

### HIGH FLASH POINT FOR IMPROVED SAFETY

Carbon deposits inside compressors can create hot spots that raise the risk of ignition. AMSOIL PC Series ISO 68 is an ashless formulation with very low carbon-forming tendencies and a flash point of 260 degC (500 degF) per ASTM D92. The fire point reaches 284 degC (543 degF). While it is not classified as a fire-resistant fluid, these properties provide a meaningful safety margin over conventional petroleum compressor oils.

### APPLICATIONS AND COMPATIBILITY

AMSOIL PC Series ISO 68 Synthetic Compressor Oil (PCJ) is recommended for single and multistage rotary screw, rotary vane, centrifugal and reciprocating compressor crankcases and cylinders. It is also suitable for vacuum pumps, pressure washer pumps, gears, bearings, blowers and other industrial pump applications. For reciprocating compressors, the ISO 68 viscosity covers single-piston, single-stage vacuum pump applications.

PC Series Oil is compatible with PAO-based, ester-based and petroleum-based compressor oils. It is not compatible with polyalkylene glycol or silicone-based oils. It is not recommended for breathing air compressors or refrigeration compressors, or for use with polycarbonate plastic (unless metal covered), PVC plastic, or butyl, ethylene-propylene or SBR rubber.

### SERVICE LIFE

In rotary compressor applications, AMSOIL PC Series ISO 68 provides up to 8,000 hours of service at 200 degF discharge temperature. Actual drain intervals depend on operating conditions and maintenance practices. Oil analysis monitoring is recommended. For best results when converting from another compressor oil, flush the system of old oil, remove any carbon deposits per the compressor manufacturer's instructions and change all filters before installing PC Series Oil.

## Technical Specifications

Property	ISO 68 (PCJ)	Test Method
ISO VG	68	ASTM D2422
Kinematic Viscosity @ 100 degC	10.2 cSt	ASTM D445
Kinematic Viscosity @ 40 degC	66.6 cSt	ASTM D445
Viscosity Index	138	ASTM D2270
Specific Gravity	0.8597	ASTM D1298
Density	7.16	ASTM D1298
Flash Point	260 degC (500 degF)	ASTM D92
Fire Point	284 degC (543 degF)	ASTM D92
Pour Point	-37 degC (-35 degF)	ASTM D97
Four-Ball Wear Test (40 kg, 1200 rpm, 75 degC, 1 hr.)	0.41 mm	ASTM D4172
Copper Strip Corrosion	1A	ASTM D130
Rust Test (Fresh and Synthetic Sea Water)	Pass	ASTM D665 A & B
Foam (Sequence I, II, III)	0/0, 0/0, 0/0	ASTM D892
Demulsibility (oil/water/cuff, minutes)	40/40/0 (15)	ASTM D1401

## Frequently Asked Questions

### Q1: What equipment is AMSOIL ISO 68 100% Synthetic Compressor Oil designed for?

AMSOIL ISO 68 PC Series Synthetic Compressor Oil is recommended for use in single and multistage rotary screw, vane, centrifugal, and reciprocating compressor crankcases and cylinders. It is also suitable for vacuum pumps, pressure washer pumps, gears, bearings, blowers, and pumps. It is not recommended for breathing air compressors or refrigeration compressors. Users should consult the equipment manufacturer or AMSOIL Technical Services for specific applications.

**Q2: How does AMSOIL ISO 68 synthetic compressor oil improve compressor efficiency and reduce wear?**

AMSOIL ISO 68 PC Series Oil has low friction properties and resists viscosity increase from oxidation, helping improve overall operating efficiency. Unlike some competing compressor oils, it is anti-wear fortified and contains anti-foam additives. Good foam control reduces heat, oxidation, and wear, while high-contact regions are protected against wear for increased compressor life and lower maintenance costs. Verified users report their compressors run notably cooler, especially during long run times.

**Q3: What makes AMSOIL ISO 68 PC Series compressor oil an ashless high-flash-point formulation?**

AMSOIL ISO 68 PC Series Synthetic Compressor Oil is formulated as an ashless, high-flash-point lubricant with very low carbon-forming tendencies. This minimizes the incidence of ignition-promoting "hot spots" inside the compressor. It incorporates thermally stable synthetic base oils fortified with premium non-detergent additives and specialized anti-oxidant additives to resist varnish, carbon, and acid formation. While it provides improved fire safety compared to conventional oils, it cannot be considered non-flammable.

**Q4: How does AMSOIL ISO 68 synthetic compressor oil compare to petroleum compressor oils?**

AMSOIL ISO 68 PC Series Oil is formulated to protect compressors better and last significantly longer in service than petroleum oils, especially during hot operating conditions. It combines the inherent stability of premium synthetic base oils with specialized anti-oxidant additives to resist varnish, carbon, and acid formation. With drain intervals of up to 8,000 hours compared to the much shorter intervals typical of petroleum compressor oils, it effectively reduces maintenance frequency and waste oil disposal costs.

**Q5: How long can I go between oil changes with AMSOIL ISO 68 PC Series synthetic compressor oil?**

AMSOIL ISO 68 PC Series Synthetic Compressor Oil can last up to 8,000 hours in compressor applications under normal operation, effectively reducing maintenance and waste oil disposal costs. Drain intervals are subject to operating conditions and maintenance practices, and monitoring by oil analysis is recommended. When converting to PC Series Oil, AMSOIL recommends flushing the compressor of old oil, changing all filters, and removing any existing carbon deposits from internal components following the compressor manufacturer's recommendations.

**Q6: Is AMSOIL ISO 68 synthetic compressor oil compatible with seals, plastics, and other compressor oils?**

AMSOIL ISO 68 PC Series Synthetic Compressor Oil is compatible with petroleum oils and most synthetic oils, as well as a wide range of seals, paints, and materials. Compatible elastomers include Fluoroelastomer (Viton), Nitrile (Buna N), Polyacrylate, TFE/P, and Polyurethane. Compatible plastics include Acetal (Delrin), ABS, Nylon, PTFE (Teflon), and others. However, it is not compatible with polyalkylene glycol or silicone oils, and it should not be used with non-metal-covered polycarbonate plastic, PVC plastic, or butyl, ethylene-propylene, or SBR rubber.

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**Available Product Codes**

Product Code	Package Size	Unit of Measure
PCJ05-EA	5 Gallon Pail	Each
PCJ55-EA	55 Gallon Drum	Each
PCJ27-EA	275 Gallon Tote	Each

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