Compressor Oil

AMSOIL ISO 32 100% SYNTHETIC COMPRESSOR OIL

Product Code: PCH05-EA

Extend compressor life and cut maintenance with this synthetic oil--resists varnish, reduces wear, and lasts up to 8,000 hours.

Product Description

AMSOIL ISO 32 100% Synthetic Compressor Oil delivers extended drain intervals up to 8,000 hours while protecting rotary screw, rotary vane, centrifugal and reciprocating compressors from varnish, wear and oxidation. It is built for facilities and shops that run compressors hard and need a lubricant that outlasts conventional petroleum oils by a wide margin.

Compressors generate significant heat during continuous operation, and that heat breaks down conventional oils quickly. The result is varnish deposits on internal components, acid formation, increased friction and unplanned downtime. Condensation compounds the problem by introducing water into the oil, promoting rust and corrosion. An ISO 32 synthetic compressor oil formulated to handle these conditions pays for itself in reduced maintenance, fewer oil changes and longer equipment life.

RESISTS VARNISH AND CARBON DEPOSITS AT HIGH DISCHARGE TEMPERATURES

Varnish buildup is one of the most common causes of compressor inefficiency and mechanical failure. AMSOIL tested PC Series Synthetic Compressor Oil against a leading competitor in industrial rotary screw compressors operating at 200 degF oil discharge temperature, evaluated using the Membrane Patch Colorimetry Test (ASTM D7843). The competitor oil reached critical varnish potential after only 6,228 hours. AMSOIL PC Series maintained ultra-low varnish potential through the full 8,000-hour test interval. That difference translates directly to cleaner compressor internals and fewer unscheduled shutdowns.

REDUCES OIL CONSUMPTION BY 35%

Frequent top-offs waste both time and money, especially in multi-compressor shops or industrial facilities. In an 8,000-hour side-by-side comparison in an industrial rotary screw compressor under identical operating conditions, AMSOIL PC Series Synthetic Compressor Oil required 35% less top-off oil than the leading competitor synthetic. Superior foam resistance and air-release properties keep the oil where it belongs instead of being carried out through the discharge.

CONTROLS FOAM AND REDUCES WEAR

Foam in compressor oil accelerates oxidation, generates excess heat and reduces the oil film protecting critical surfaces. AMSOIL PC Series Oil is formulated with anti-foam additives and achieves 0/0 foam tendency and stability across all three sequences of ASTM D892 testing. It is also anti-wear fortified, recording a 0.40 mm wear scar in Four-Ball Wear testing (ASTM D4172, 40 kg, 1200 rpm, 75 degC, 1 hour). Many compressor oils skip anti-wear additives entirely.

SEPARATES FROM WATER QUICKLY FOR EASIER MAINTENANCE

Water contamination from condensation creates emulsions that promote rust, corrosion and acid buildup. AMSOIL PC Series Oil is hydrolytically stable and separates cleanly from water. In ASTM D1401 demulsibility testing, it achieved complete 40/40/0 separation in just 15 minutes. It also passes both fresh water and synthetic sea water rust tests (ASTM D665 A and B), keeping compressor

internals protected even in humid environments.

HIGH FLASH POINT FOR IMPROVED FIRE SAFETY

Compressor environments present real ignition risks, particularly in reciprocating units where carbon deposits can create hot spots. AMSOIL PC Series ISO 32 has a flash point of 252 degC (486 degF) and a fire point of 272 degC (522 degF). Its ashless formulation produces very low carbon residue, reducing the formation of ignition-promoting deposits. While it provides improved fire safety margins over petroleum oils, it is not classified as a fire-resistant fluid.

SPECIFICATIONS AND COMPATIBILITY

AMSOIL PC Series ISO 32 Synthetic Compressor Oil is classified as ISO VG 32 (SAE 10W equivalent). It is compatible with PAO-based, ester-based and petroleum-based compressor oils. It is not compatible with polyalkylene glycol (PAG) or silicone-based compressor oils. It is also not recommended for breathing air compressors or refrigeration compressors. Compatible elastomers include Viton, Buna N, polyacrylate, TFE/P and polyurethane. Not recommended for use with polycarbonate plastic (unless metal covered), PVC plastic, or butyl, ethylene-propylene or SBR rubber.

SERVICE LIFE

In rotary compressor applications (rotary screw, rotary vane, centrifugal), AMSOIL PC Series ISO 32 provides drain intervals up to 8,000 hours at 200 degF discharge temperature under normal operating conditions. Drain intervals depend on operating conditions and maintenance practices. Oil analysis monitoring is recommended to confirm drain interval suitability for your specific application. For best results when converting from another compressor oil, flush the system of old oil, remove any existing carbon deposits per the compressor manufacturer's recommendations and change all filters before installing PC Series Oil.

Technical Specifications

Property	ISO 32 (PCH)	Test Method
ISO VG	32	ASTM D2422
Kinematic Viscosity @ 100 degC	6.1 cSt	ASTM D445
Kinematic Viscosity @ 40 degC	32.3 cSt	ASTM D445
Viscosity Index	139	ASTM D2270
Specific Gravity	0.8499	ASTM D1298
Density (lbs/gal)	7.08	ASTM D1298
Flash Point	252 degC (486 degF)	ASTM D92
Fire Point	272 degC (522 degF)	ASTM D92
Pour Point	-40 degC (-40 degF)	ASTM D97
Four-Ball Wear Test (40 kg, 1200 rpm, 75 degC, 1 hr.)	0.40 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 32 100% Synthetic Compressor Oil designed for?

AMSOIL ISO 32 100% Synthetic Compressor Oil (PCH05-EA) 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, and other applications such as gears, bearings, blowers, and pumps. It is not recommended for breathing air compressors or refrigeration compressors.

Q2: How does AMSOIL ISO 32 Synthetic Compressor Oil improve compressor efficiency and reduce wear?

AMSOIL ISO 32 PC Series Compressor Oil has low friction properties and resists viscosity increase from oxidation, helping improve overall operating efficiency. Unlike some other 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 specifically protected against wear for increased compressor life and lower maintenance costs. Customer reviews also confirm the oil keeps compressors running notably cooler, especially during long run times.

Q3: What makes AMSOIL ISO 32 Synthetic Compressor Oil safer than petroleum compressor oils?

AMSOIL ISO 32 PC Series Compressor Oil is an ashless, high-flash-point formulation with very low carbon-forming tendencies. This minimizes the incidence of ignition-promoting "hot spots" inside the compressor, providing an improved fire safety advantage over conventional petroleum compressor oils. However, AMSOIL notes that while it offers improved fire safety, it cannot be considered non-flammable.

Q4: How does AMSOIL ISO 32 Synthetic Compressor Oil compare to petroleum compressor oils?

AMSOIL ISO 32 PC Series Compressor Oil is formulated to protect compressors better and last significantly longer in service than petroleum oils, especially during hot operating conditions. It combines thermally stable synthetic base oils with specialized anti-oxidant additives to resist varnish, carbon, and acid formation. Its drain intervals of up to 8,000 hours far exceed those typical of petroleum compressor oils, effectively reducing maintenance and waste oil disposal costs.

Q5: How long can I run AMSOIL ISO 32 Synthetic Compressor Oil before changing it?

AMSOIL ISO 32 PC Series Compressor Oil can last up to 8,000 hours or more under normal compressor operation, significantly reducing maintenance frequency and waste oil disposal costs. Drain intervals are subject to operating conditions and maintenance practices, and AMSOIL recommends monitoring oil condition through oil analysis. For best performance when converting to PC Series Oil, AMSOIL recommends flushing the old oil, changing all filters, and removing any existing carbon deposits following the compressor manufacturer's recommendations.

Q6: Is AMSOIL ISO 32 Synthetic Compressor Oil compatible with other oils and compressor seals?

AMSOIL ISO 32 PC Series Compressor Oil is compatible with petroleum oils and most synthetic oils, as well as a wide range of seals, paints, plastics, and elastomers including Viton, Nitrile (Buna N), PTFE (Teflon), Nylon, ABS, and polyurethane. It is also compatible with gases such as nitrogen, natural gas, propane, and many 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.

Available Product Codes

Product Code	Package Size	Unit of Measure
PCH05-EA	5 Gallon Pail	Each
PCH55-EA	55 Gallon Drum	Each

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