

UCON Refrigerant Oil

Enhanced Compressor Lubricants from Dow Automotive

Dow Automotive offers a broad portfolio of fluid technologies to ensure the safe and efficient operation of today's demanding motor vehicle systems. This portfolio includes performance fluids and lubricants that are supplied worldwide, including mobile air conditioner compressor lubricants, brake fluids and engine coolants.

The Dow Chemical Company is a leading provider of the key raw materials used to produce Dow Automotive fluids, including glycol ethers, glycols and polyglycols. This, combined with application expertise developed over the 50 years we've supplied automotive fluids, enables us to provide OEM and aftermarket customers with solutions that meet or exceed performance and cost targets.

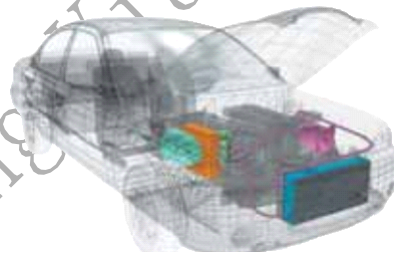
Performance benefits of Dow Automotive polyalkylene glycol (PAG) compressor lubricant technology include:

- High miscibility in the refrigerant (R-134a)
- Excellent lubricity
- High viscosity indexes
- Good oxidative, thermal and chemical stability
- Solubility can be customized for specific applications
- Outstanding long-term durability
- Compatibility with elastomers, including hydrogenated nitrile butadiene rubber and neoprene

Low pour points

Low toxicity, good biodegradability for low-viscosity PAGs

PAGs are hygroscopic relative to mineral oils and can be dried to below 100 ppm



Applications

- Mobile air compressors for OEMs and the aftermarket
- Compressor lubrication
- Assembly lubricant
- Air conditioning recharges

Product advantages and ROI

Wide range of compatibility with a variety of air compressor technologies

Unique formulation provides equal or better lubricity performance than double end-cap products at a lower price

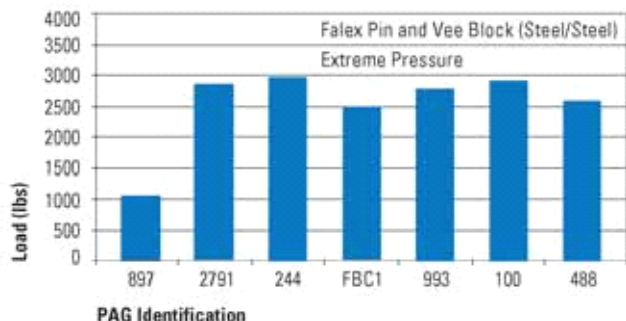
PAG lubricity provides inherent polarity and a natural affinity for metal surfaces

High viscosity indexes maintain viscosity in hot compressor and demonstrate excellent low-temperature flow properties

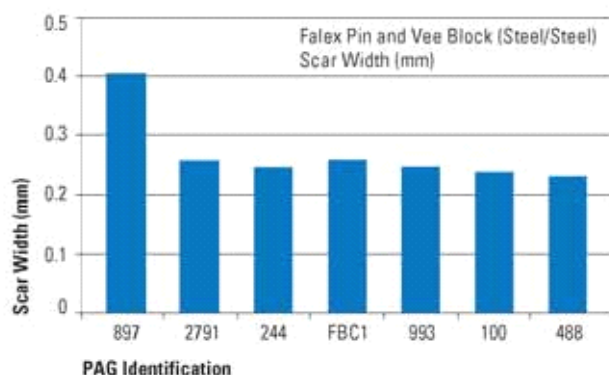
Our own raw materials resource enables improved cost efficiencies, reliable product supply, guaranteed quality standards

More than 50 years of industry experience enables the development of products with outstanding performance properties

UCON[®] lubricants are compatible with standard compressor types, and are approved by major compressor manufacturers and automotive OEMs.



Graph conditions: Load to failure (lbs) based on modified ASTM D 3233, AISI 1137 steel block/AISI 3135 steel pin #10, break-in load 200 lbs @ 1 min, 290 RPM, oil weight = 95 gm, neat, T= room temperature, P=1 atm.



Graph conditions: Scar width (mm) based on modified ASTM D 2670, break-in load 200 lbs @ 1 min, load @ 300 lbs for 60 minutes, AISI 1137 steel block/AISI 3135 steel pin #10, 290 RPM, scar diameter is reported instead of teeth wear, oil weight = 95 gm, neat, temperature = room temperature, P= 1 atm.

Typical properties

Dow Automotive Compressor
Lubricants for OEM and Aftermarket
R134a-based Systems

Lubricant	Viscosity @40°C	Extreme Pressure (lbs)	Upper Miscibility ¹ (°C)
RL-488	132 cSt	2628	41
URL-100	100 cSt	2932	45
RL-993	80 cSt	2784	45
RL-897	61 cSt	1059	64
FBC-1	62 cSt	2490	69
RL-244	52 cSt	2982	61
RIL-2791	18 cSt	2835	> 90

¹ Separation temperature at 9% lubricant by weight.

Full-service support from a single-source supplier

In addition to the largest selection of material solutions, Dow Automotive offers the following services to meet your compressor lubricant needs:

- Product development support
- Materials engineering reviews
- Submission of production part approval process information, including full material specification data
- Cost-saving opportunities aligned with value-engineering initiatives
- Product samples and functional trials
- Assisting R&D, manufacturing and management with product optimization

Contact your customer service representative or visit dowautomotive.com for more information. For technical information, select "Downloads" on the home page and "Technical Data Sheets" on the next page.

We listen. We deliver.



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