

UNIVERSAL PAG OIL 1L

PN: R2313

1. PRODUCT IDENTIFIER

UNIVERSAL PAG OIL - 1L

1.1 Relevant uses: For lubrication of R134a automotive air conditioning compressors

1.2. Details of the supplier of the safety data sheet

Company: RHINOMOTIVE LTD - UK 71-75 SHELTON STREET, LONDON, UNITED KINGDOM

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2. AVAILABLE SIZES

No	PN	name	Volume	Size
1	R2303	Universal Pag Oil 250 ml	250 ml	52,5 x 52,5 x 160 mm
2	R2313	Universal Pag Oil 1L	1 Litre	65 x 107 x 229 mm

3. TECHNICAL SPECIFICATIONS

No	DESCRIPTION	UNIT
1	Content	Polyalchilenglycol
2	State	Liquid
3	Colour	Pale Yellow
4	Odour	Mild Acid
5	Temperature resistance range	-30 °C to +50 °C
6	Size	1L (65 x 107 x 229 mm)

4. PRODUCT CONSTRUCTION

No	Name	CAS#	Percentage
1	Universal Pag Oil	Mixture	100%

5. DIRECTIONS FOR USE

- The polyalchilenglycol (PAG) lubricants series are fully synthetic lubricants with high oxidation resistance features, specifically developed for the lubrication of rotary refrigerators compressors, that need a very low freezing point and very long drain intervals.
- These lubricants are specifically suitable where the compressor manufacturer suggest a fully synthetic lubricant with polyalkylene glycol base oils (PAG).
- These products are particularly also suggested in cases of extreme temperature changes, and when it is necessary to maximize the life service interval and consequentially minimize downtime and labor costs.

5.1. Properties

- Products with superior features compared to traditional mineral-based lubricants.
- Maximum duration of exercise, in order to extend the oil change intervals.
- Possible use with the widest temperature range (-30 °C to +50 °C).
- No carbon deposits in the hot spots of the compressor, thanks to the synthetic nature.
- Excellent protection against rust, corrosion and wear of the components.
- Avoids the formation of foam, to avoid the phenomenon of cavitation.

5.2. Safety Information

WARNINGS

- The polyalkyleneglycol base oils (PAG) series makes these product NON-compatible with conventional mineral and synthetic hydrocarbon based lubricants without polyalkyleneglycols PAG.
- Before the lubricant drain, it is necessary to thoroughly clean the circuit.
- In case of change in the nature of the lubricant, if possible wash the entire system with solvent liquids, ensuring that there are no residues of the old lubricant or washing fluid before refill.
- Keep in a dry place in tightly closed containers.
- Read and observe the safety warnings on the container label.
- For information on handling, transport, etc. refer to the Material Safety Data Sheet (MSDS) relating to the product in question.

5.3. Average Physical And Chemical Features

No	ISO Viscosity Grade ISO 3448	Unit	46	68	100	150	220	46 (R-1234yf)	100 (R-1234yf)
1	Physical state at 20°C		Clear liquid, colorless, slightly odor						
2	Pour Point ASTM D 97	°C	-38	-35	-34	-34	-31	-45	-35
3	Flash Point COC ASTM D 92	°C	> 205	> 210	> 220	> 230	> 240	> 200	> 230
4	Density at 20°C	Kg/mc	990	990	990	1000	1000	985	1000
5	Solubility in water		Insoluble in water						
6	Kinematic Viscosity at 40°C	cSt	42-50	66-72	90-110	135-165	200-240	42-50	90-110
7	Kinematic Viscosity at 100°C	cSt	~ 9	~ 14	~ 20	~ 27	~ 39	~ 9	~ 20
8	Viscosity Index		186	190	195	210	220	210	210

5.4. Compatibility Indication Between Refrigerant Gas And Lubricant

No	Refrigerant gas	mineral based	PAG based	POE based	PAO based
1	R134a		Compatible	Compatible	

- Non-binding indications - It is always advisable to follow the instructions of the manufacturers of the systems or suppliers of refrigerant gases.

6. SHELF LIFE

- One year from date of receipt by the customer when stored at 20 - 30°C and 30 - 60% relative humidity

7. PERFORMANCE PROPERTIES

Not applicable

8. STORAGE

Store in a dry and well-ventilated area between 20 - 30°C and 30 - 60% relative humidity

9. TEST REPORT

Not applicable



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TECHNICAL DATA SHEET

10. DISCLAIMER

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