REFRIGERANT FACT SHEET
R134a

CHARACTERISTICS

R134a is a commonly used refrigerant in a wide range of medium and high-temperature refrigeration and air conditioning applications.

R134a is a common component in many HFC refrigerant blends and is used in some propellant applications.

PERFORMANCE

- R134a is suitable for use in new equipment and can be used as a retrofit in some R12 and R22 applications with an oil change
- Compressors must be charged with polyolester oil (check OEM guidelines)
- Lower GWP alternatives include R1234yf, R1234ze, R513A and R450A

APPLICATIONS

Medium Temperature Refrigeration
- Commercial
- Domestic
- Cascade systems

Air Conditioning
- Industrial
- Commercial
- Automotive

Water Chillers

PHYSICAL ATTRIBUTES

- ODP: 0
- GWP: 1430
- Class/ Type: Zeotropic blend (A1)
- Refrigerant Kind: HFC
- Oil Type: Polyolester oil (POE) and PAG
- Glide: N/A

FEATURES

- Refrigerant can be charged from either the liquid or vapour phase
- R134a is miscible with synthetic oil or lubricant and is compatible with PAG-Auto and POE oil
- Non-flammable
- Cost-effective
- Energy efficient

THERMODYNAMIC PERFORMANCE

- Comparable physical and thermodynamic properties to R12
- Reduction in capacity compared to R12
- Excellent coefficient of performance

PRODUCT PART NUMBERS

- **H134012** 12kg Cylinder
- **H134022** 22kg Cylinder
- **H134065** 65kg Cylinder
- **H134450** 450kg Cylinder

For safety, handling and storage information please refer to the MSDS (available on Chemwatch)

PRESSURE TEMPERATURE CHART

C°	Pressure (kPa)
-40	-47
-38	-41
-36	-35
-34	-28
-32	-21
-30	-14
-28	-5
-26	3
-24	14
-22	26
-20	39
-18	49
-16	59
-14	72
-12	86
-10	101
-8	118
-6	135
-4	153
-2	172
0	192
2	211
4	229
6	253
8	283
10	313
12	342
14	372
16	403
18	436
20	469
22	507
24	544
26	584
28	626
30	668
32	715
34	761
36	811
38	863
40	915
42	972
44	1029
46	1090
48	1153
50	1217

PHYSICAL PROPERTIES

Class/ Type	Zeotropic blend
Formula	100% R134a
Kind	HFC
Appearance	Colourless
ODP	0
GWP	1430
ASHRAE Std. 34 Safety Class	A1

Units	Physical Properties
Molecular Weight	102.03 kg/mol
Boiling Point	–26.1°C
Critical Temperature	101.1°C
Critical Pressure	46.6 bar
Critical Volume	0.00194 m^3/ kg
Critical Density	515.3 kg/m^3
Vapour Density at Boiling Point	367.064 kg/m^3
Liquid Density at 0°C	1295.1 kg/m^3

OUR SERVICES

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