



## R-417A (FREON® MO59)

### GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATIONS	LIMIT VALUE
Composition :	
R-125	46.6 % (± 1.1)
R-134a	50 % (± 1.0)
R-600	3.4 % (-0.4/+ 0.1)
Purity	≥ 99,5 % weight
Water content	≤ 10 ppm weight
Acidity	≤ 1 ppm weight
Non-condensable content (gas phase)	≤ 1.5 % volume
High boiling residues	≤ 0.01 % volume

### MAIN APPLICATIONS

R-417A (FREON® MO59) is a non-azeotropic HFC blend intended as a “direct replacement” for R-22 (HCFC) in direct expansion small air-conditioning applications.

Note : For water chiller applications R-438A (ISCEON® MO99) is recommended.

### OILS

Use a mineral oil (MN), alkylbenzene (AB), or polyol ester (POE).

Check with **Climalife** regarding the viscosity of the oil selected for your application, and the miscibility with the fluid under consideration.

### PRECAUTIONS OF USE

Refer to the Safety Data Sheet\*.

### REGULATION

Use, implementation and recovery are governed by European regulation no. 2024/573.

It is also important to refer to the regulations in force in each country in Europe and outside Europe.

\*Find Safety Data Sheets (SDS) directly on our website [www.climalife.com](http://www.climalife.com)



## R-417A PHYSICAL PROPERTIES

Molar mass	g/mol	106.75
Melting point	°C	N/A
Boiling point (at 1.013 bar)	°C	-39.07
Temperature glide at 1.013 bar	K	4.99
Saturated liquid density at 25°C	kg/m <sup>3</sup>	1151
Saturated vapour density at boiling point	kg/m <sup>3</sup>	5.680
Vapour pressure at: 25°C	bar	9.84
50°C	bar	18.44
Critical temperature	°C	87.1
Critical pressure	bar	40.35
Critical density	kg/m <sup>3</sup>	521
Latent heat of vaporisation at boiling point	kJ/kg	200.75
Thermal conductivity of liquid at 25°C	W/(m.K)	0.071
Thermal conductivity of vapour at 1.013 bar	W/(m.K)	0.014
Surface tension at 25°C	10 <sup>-3</sup> N/m	6.48
Viscosity of liquid at 25°C	10 <sup>-3</sup> Pa-s	0.165
Viscosity of vapour at 1.013 bar	10 <sup>-3</sup> Pa-s	0.012
Specific heat of liquid at 25°C	kJ/(kg.K)	1.444
Specific heat of vapour at 1.013 bar	kJ/(kg.K)	0.855
Cp/Cv ratio at 25°C at 1.013 bar		1.111
Flammability in air		non-flammable
Flash point	°C	none
Classification NF-EN 378 ASHRAE		A1 A1
Ozone Depletion Potential	(R-11 = 1)	0
GWP according to Regulation (EU) 2024/573 (F-Gas III)	(CO <sub>2</sub> = 1)	2346
GWP (AR4 / AR6)		2346 / 2508

Please contact your distributor or our **Climalife** sales department for more information. In addition, if the refrigeration system you want to install, or are working on, does not appear to be a typical installation, please do not hesitate to contact us for advice and information.

*The information contained in this product sheet is the result of our studies and experience. It is provided in good faith, but should not, under any circumstance, be taken to constitute a guarantee on our part or an assumption of our responsibility. This is particularly the case when third party rights are at stake or in situations where a user of one of our products fails to observe applicable regulations.*



For more information, please visit our website:  
[climalife.com/contact\\_us](http://climalife.com/contact_us)



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