



VIN-FP-540/007

**climalife**<sup>®</sup>

## R-417A (FREON<sup>®</sup> MO59)

### GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATIONS	LIMIT VALUE
Composition :	
R-125	46,6 % ( $\pm 1,1$ )
R-134a	50 % ( $\pm 1,0$ )
R-600	3,4 % (-0,4/+ 0,1)
Purity	$\geq 99,5$ % weight
Water content	$\leq 10$ ppm weight
Acidity	$\leq 1$ ppm weight
Non-condensable content (gas phase)	$\leq 1,5$ % volume
High boiling residues	$\leq 0.01$ % volume

### MAIN APPLICATIONS

R-417A (FREON<sup>®</sup> 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<sup>®</sup> 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

The use and implementation of R-417A are governed by EU Regulation n° 517/2014.

The recovery of R-417A is mandatory under EU Regulation n° 517/2014.

(Refer to regulations enforced in each country)

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



R-417A

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**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 IPCC-AR4/IPCC-AR5	(CO <sub>2</sub> = 1)	2346/2127

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.

Les renseignements contenus dans cette fiche produit sont les résultats de nos études et de notre expérience. Ils sont donnés de bonne foi, mais ne peuvent en aucun cas constituer de notre part une garantie, ni engager notre responsabilité, particulièrement en cas d'atteinte aux droits des tiers, ni en cas de manquement des utilisateurs de nos produits aux réglementations en vigueur les concernant.

For more information, please visit our website:



[http://www.climalife.dehon.com/contact\\_us](http://www.climalife.dehon.com/contact_us)