



## R-450A

### GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATION *	LIMIT VALUE
Composition	
- R-134a	42 % (+2,0% -2,0%)
- R-1234ze	58 % (+2,0% -2,0%)
Purity	≥ 99.5 % weight
Water content	≤ 10 ppm weight
Chlorine ion test (silver nitrate test)	Negative
Total Acidity (HCL)	≤ 1 ppm weight
Non-condensable content (gas phase)	≤ 1.5 % volume

\* data producer

### MAIN APPLICATIONS

R-450A is a near azeotropic blend containing an HFO refrigerant, designed to replace R-134a in commercial and industrial refrigerators, as well as air conditioning and chillers. Its atmospheric pressure temperature glide is less than 1k, and can be used in direct expansion or flooded evaporator systems.

### OILS

Use a polyol ester (POE) oil.  
Consult **Climalife** regarding the viscosity of the oil selected for your system and the most suitable for your application.

### PRECAUTIONS OF USE

Refer to the Safety Data Sheet \*.

### REGULATION

The use and implementation of R-450A are governed by the European Regulation No 517/2014 .

The recovery of R-450A is mandatory under the European Regulation No 517/2014 (Refer to regulations enforced in each country.)

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



R-450A

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### R-450A PHYSICAL PROPERTIES

Molar mass	g/mol	108.7
Melting point	°C	N/A
Boiling point (at 1.013 bar)	°C	-24.94
Temperature glide at 1.013 bar	K	0.78
Saturated liquid density at 25°C	kg/m <sup>3</sup>	1169
Vapour density at boiling point	kg/m <sup>3</sup>	5.553
Vapour pressure at: 25°C	bar	6.23
50°C	bar	12.27
Critical temperature	°C	105.65
Critical pressure	bar	40.82
Critical density	kg/m <sup>3</sup>	499
Latent heat of vapourisation at boiling point	kJ/kg	202.93
Thermal conductivity at 25°C		
Liquid	W/m.K	0.076
Vapour at 1.013 bar	W/m.K	0.014
Surface tension at 25°C	10 <sup>-3</sup> N/m	0.0089
Solubility at 25°C of water in the fluid	% weight	/
Viscosity at 25°C		
Liquid	10 <sup>-3</sup> Pa.s	0.189
Vapour at 1.013 bar	10 <sup>-3</sup> Pa.s	0.012
Specific heat at 25°C		
Liquid	kJ/(kg.K)	1.408
Vapour at 1.013 bar	kJ/(kg.K)	0.873
Cp/Cv ratio at 25°C under 1.013 bar		1.108
Flammability in air		Non-flammable
Flash point	°C	None
Classification NF-EN 378 ASHRAE		Ongoing A1
Ozone Depletion Potential		0
GWP		
4th Assessment		605
5th Assessment		547

Please contact your distributor or **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:



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

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