



## R-450A (Solstice® N13)

### 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
Total Acidity (HCL)	≤ 1 ppm weight
Non-condensable content (gas phase)	≤ 1.5 % volume

\* data producer

### MAIN APPLICATIONS

R-450A (Solstice® N13) is a near azeotropic blend containing hydrofluorocarbons (HFCs) and low GWP hydrofluoro-olefins (HFOs), designed to replace R-134a in domestic, commercial and industrial refrigeration applications, as well as in air conditioning, chillers and heat pumps.

With its atmospheric pressure temperature glide of less than 1k, it 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

Use, implementation and recovery of R-450A 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 the Safety Data Sheet (SDS) directly on our website [www.climalife.com](http://www.climalife.com)


**R-450A PHYSICAL PROPERTIES (SOLSTICE® N13)**

Molar mass	g/mol	108.67
Melting point	°C	N/A
Boiling point (at 1.013 bar)	°C	-23.36
Temperature glide at 1.013 bar	K	0.61
Saturated liquid density at 25°C	kg/m <sup>3</sup>	1177
Vapour density at boiling point	kg/m <sup>3</sup>	5.521
Vapour pressure at: 25°C	bar	5.90
50°C	bar	11.69
Critical temperature	°C	105.6
Critical pressure	bar	39.13
Critical density	kg/m <sup>3</sup>	499
Latent heat of vapourisation at boiling point	kJ/kg	204.25
Thermal conductivity at 25°C		
Liquid	W/m.K	0.077
Vapour at 1.013 bar	W/m.K	0.014
Surface tension at 25°C	10 <sup>-3</sup> N/m	8.65
Viscosity at 25°C		
Liquid	10 <sup>-3</sup> Pa.s	0.195
Vapour at 1.013 bar	10 <sup>-3</sup> Pa.s	0.012
Specific heat at 25°C		
Liquid	kJ/(kg.K)	1.403
Vapour at 1.013 bar	kJ/(kg.K)	0.873
Cp/Cv ratio at 25°C under 1.013 bar		1.109
Flammability in air		Non-flammable
Flash point	°C	None
Classification NF-EN 378 PE(S)R		A1 Category 2
Ozone Depletion Potential		0
GWP according to Regulation (EU) 2024/573 (F-Gas III)	(CO <sub>2</sub> = 1)	601
GWP (AR4 / AR6)		605/643

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.*



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[climalife.com/contact\\_us](https://climalife.com/contact_us)



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