



## R-449A

### GUARANTEED COMMERCIAL SPECIFICATION

| STANDARD SPECIFICATION *            | LIMIT VALUE        |
|-------------------------------------|--------------------|
| Composition                         |                    |
| - R-32                              | 24.3 % (+0.2% -1%) |
| - R-125                             | 24.7 % (+1% -0.2%) |
| - R-1234yf                          | 25.3 % (+0.2% -1%) |
| - R-134a                            | 25.7 % (+1% -0.2%) |
| 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-449A is a non-azeotropic blend containing refrigerants based on hydrofluorocarbons (HFCs) and hydrofluoro-olefins (HFOs), with low GWP. It has been designed to replace R-404A in medium and low temperature commercial and industrial refrigeration applications. It is suitable for supermarkets and hypermarkets including centralised pack systems and chill and frozen cold stores.

It can be used as a replacement for R-22 but must be in accordance with conversion guidelines.

### OILS

Use a polyol ester (POE) oil.

Consult **Climalife** regarding the viscosity of the oil selected for your application and the most suitable for your application.

### PRECAUTIONS OF USE

Refer to the Safety Data Sheet \*.

### REGULATION

Use, implementation and recovery of **R-449A** 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-449A PHYSICAL PROPERTIES

|                                                               |                       |                     |
|---------------------------------------------------------------|-----------------------|---------------------|
| Molar mass                                                    | g/mol                 | 87.21               |
| Melting point                                                 | °C                    | N/A                 |
| Boiling point (at 1.013 bar)                                  | °C                    | -45.72              |
| Temperature glide at 1.013 bar                                | K                     | 5.72                |
| Saturated liquid density at 25°C                              | kg/m³                 | 1097                |
| Vapour density at boiling point                               | kg/m³                 | 4.758               |
| Vapour pressure at:<br>25°C<br>50°C                           | bar                   | 12.69<br>23.41      |
| Critical temperature                                          | °C                    | 83.9                |
| Critical pressure                                             | bar                   | 46.62               |
| Critical density                                              | kg/m³                 | 480                 |
| Latent heat of vaporisation at boiling point                  | kJ/kg                 | 238.67              |
| Thermal conductivity at 25°C<br>Liquid<br>Vapour at 1.013 bar | W/m.K                 | 0.080<br>0.014      |
| Surface tension at 25°C                                       | 10 <sup>-3</sup> N/m  | 6.59                |
| Viscosity at 25°C<br>Liquid<br>Vapour at 1.013 bar            | 10 <sup>-3</sup> Pa.s | 0.139<br>0.012      |
| Specific heat at 25°C<br>Liquid<br>Vapour at 1.013 bar        | kJ/(kg.K)             | 1.550<br>0.851      |
| Cp/Cv ratio at 25°C at 1.013 bar                              |                       | 1.139               |
| Flammability in air                                           |                       | Non-flammable       |
| Flash point                                                   |                       | None                |
| Classification NF-EN 378<br>PED                               |                       | A1<br>Category 2    |
| Ozone Depletion Potential                                     |                       | 0                   |
| GWP according to Regulation (EU) 2024/573 (F-Gas III)         | (CO <sub>2</sub> = 1) | 1396<br>1397 / 1504 |
| GWP (AR4 / AR6)                                               |                       |                     |

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



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