



## R-401A

(ZEOTROPIC MIXTURE)

### GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATIONS	LIMIT VALUE
Composition	
R-22	53 % (+1.5% -0.5%)
R-152a	13 % (+0.5% -1.5%)
R-124	34 % (± 1%)
Water content	≤ 10 ppm weight
Acidity (HCl)	≤ 0.1 ppm weight
Non-condensable content (gas phase)	≤ 1.5 % volume
High-boiling residues	≤ 0.01 % volume

### MAIN APPLICATIONS

**R-401A** is a HCFC type "zeotropic" transition mixture, of usage regulated over time (Montreal Protocol), designed for R-12 (CFC) current uses in domestic, commercial, and industrial cooling domains.

It is preferably used in conversions for eliminating R-12.

It should not be used in automotive air-conditioning conversion.

### OILS

Use an alkylbenzene (AB) or even polyol ester (POE) oil in agreement with the compressor manufacturer.

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

Using **R-401A** is governed by European regulation n° 2037/2000 of June 29, 2000:

- using **R-401A** is completely prohibited in new setup as of 12.31.2003
- using virgin **R-401A** is prohibited for maintenance and service as of 01.01.2010
- using **R-401A**, even recycled, is completely prohibited as of 01.01.2015.

In Europe, **R-401A** recovery is mandatory as per regulation n° 842/2006.

(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-401 A

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## R-401A PHYSICO-CHEMICAL PROPERTIES

Molar mass	g/mol	94.44
Melting point	°C	N/A
Boiling point (under 1.013 bar)	°C	- 34.42
Temperature drift under 1.013 bar	K	5.58
Saturated fluid density at 25°C	kg/m <sup>3</sup>	1181
Saturated vapour density at boiling point	kg/m <sup>3</sup>	4.893
Vapour tension at 25°C	bar	8.14
Critical temperature	°C	105.3
Critical pressure	bar	46.13
Critical density	kg/m <sup>3</sup>	495.1
Latent heat of vaporisation at boiling point	kJ/kg	226.7
Thermal conductivity at 25°C		
Liquid	W/(m.K)	0.0798
Vapour under 1.013 bar		0.0113
Surface tension at 25°C	10 <sup>-3</sup> N/m	8.9
Solubility at 25°C of water in the fluid	% weight	0.10
Viscosity at 25°C		
Liquid		0.176
Vapour under 1.013 bar	10 <sup>-3</sup> Pa-s	0.0121
Specific heat capacity at 25°C		
Liquid	kJ/(kg.K)	1.28
Vapour under 1.013 bar	kJ/(kg.K)	0.739
Cp/Cv ratio at 25°C under 1.013 bar		1.15
Flammability in air		non-flammable
NF-EN 378 classification		L1
Potential effect on ozone (ODP)	(R-11 = 1)	0.03

Please contact your distributor or **Climalife** sales department for more information. Also, if the refrigerated system you want to install does not appear to you as a typical case, we are at your service to provide opinions and advices.

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)