



VIN-FP-550/005

# climalife®

## Solstice® ze

R-1234ze - (Trans-1,3,3,3-tetrafluoroprop-1-ène)

### GUARANTEED COMMERCIAL SPECIFICATIONS

| STANDARD SPECIFICATION*             | LIMIT VALUE     |
|-------------------------------------|-----------------|
| 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

**Solstice™ ze** is a single component fluorinated gas from the HFO family. This product has a very low GWP figure and is suitable for refrigeration, chillers and heat pumps applications.

### 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

The use and implementation of **Solstice™ ze** are governed by EU Regulation n° 517/2014.

The recovery of **Solstice™ ze** 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)



Solstice<sup>®</sup> ze

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## SOLSTICE<sup>®</sup> ZE PHYSICOCHEMICAL PROPERTIES

|  |                       |                              |
|--|-----------------------|------------------------------|
| Molar mass                                   | g/mol                 | 114.04                       |
| Melting point                                | °C                    | -104.53                      |
| Boiling point (at 1.013 bar)                 | °C                    | -18.98                       |
| Saturated fluid density at 25°C              | kg/m <sup>3</sup>     | 1163                         |
| Vapour density at boiling point              | kg/m <sup>3</sup>     | 5.705                        |
| Vapour pressure at:<br>25°C                  | bar                   | 4.99                         |
| 50°C   | bar                   | 9.97                         |
| Critical temperature                         | °C                    | 109.4                        |
| Critical pressure                            | bar                   | 36.35                        |
| Critical density                             | kg/m <sup>3</sup>     | 489.24                       |
| Latent heat of vaporisation at boiling point | kJ/kg                 | 195.62                       |
| Thermal conductivity of liquid at 25°C       | W/m.K                 | 0.0744                       |
| Thermal conductivity of vapour at 1.013 bar  | W/m.K                 | 0.014                        |
| Surface tension at 25°C                      | 10 <sup>-3</sup> N/m  | 8.85                         |
| Viscosity of liquid at 25°C                  | 10 <sup>-3</sup> Pa.s | 0.199                        |
| Viscosity of vapour at 1.013 bar             | 10 <sup>-3</sup> Pa.s | 0.0123                       |
| Specific heat of liquid at 25°C              | kJ/(kg.K)             | 1.386                        |
| Specific heat of vapour at 1.013 bar         | kJ/(kg.K)             | 0.889                        |
| Cp/Cv ratio at 25°C under 1.013 bar          |                       | 1.101                        |
| Flammability in air                          |                       | Mildly flammable             |
| Flashing point                               |                       | None                         |
| Classification NF-EN 378<br>ASHRAE<br>PED    |                       | A2L<br>A2L<br>PED Category 2 |
| Ozone Depletion Potential                    |                       | 0                            |
| GWP<br>According to IPCC-AR4/IPCC-AR5        |                       | 7/1                          |

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.

**Solstice™** is trademark of Honeywell International Inc.

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For more information, please visit our website:



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