



climalife®

STP-FP-111 v. 005 -

Solstice® Propellant HFO 1234ze



Honeywell

The **Solstice® Propellant HFO 1234ze** is a product developed and manufactured by Honeywell.

PERFORMANCES

Solstice® Propellant HFO 1234ze is a hydrofluoropropene. Of constant quality, it has the whole necessary requirements for a liquefied propellant.

Non-flammability:

Non-flammable, Solstice® Propellant HFO 1234ze has many potential uses in formulations which have safety requests (*regulation, risk environment, confined environment*). Its use enable to **decrease the non-flammability of many formulations until make them non-flammable regarding the Directive 2008/47/EC.**

Its application doesn't require particular investment regarding safety installation ATEX. **Solstice® Propellant HFO 1234ze** is conceived for the **HFC 134a substitution**. In comparison with HFC 134a it has environmental benefits on greenhouse effect.

Low GWP:

Solstice® Propellant HFO 1234ze is a 4th generation of fluorinated product. It is conformed with environmental regulations to the HFC substitution. It has no effect on ozone layer and its **impact on greenhouse effect is very negligible (GWP = 7)**. So, it is not concerned by the F-gas I (regulation No 842/2006/CE) and the F-gas II (regulation No 517/2014/EC).

SPECIFICATIONS

Standard Characteristics	Limit values
Appearance	Clear
Purity	≥ 99.5 % weight
Moisture content	≤ 50 ppm weight
Acidity (HCl)	≤ 1 ppm weight
Non volatile residue	≤ 50 ppm weight



CHARACTERISTICS

		Units	Values
Chemical formula			CHF=CH-CF₃
Chemical name			Trans-1,3,3,3-tetrafluoropropene
Molecular weight		g/mol	114
Boiling point	at 1.013 bar	°C	-19
Liquid density	at 20°C at 50°C	kg/dm ³	1.19 1.07
Relative pressure	saturating vapor at 20°C saturating vapor at 50°C	bar	3.2 8.6
Kauri-Butanol index			< 10
HFO 1234ze solubility	in water at 20°C	% weight	0.037
Water solubility	in HFO 1234ze at 20°C	% weight	0.025
Lower flammability limit	in the air at 20°C	% volume	none
Upper flammability limit	below 1.013 bar		
Auto-ignition temperature		°C	368

PACKAGING

	Cylinders			Container	Bulk
Capacity (liter)	14.3	20	52	930	5 to 20 T
Tare (kg)	4.7	7	13.49	460	
Load (kg)	13	19	52	945	
Diameter (mm)	250	300	330	860	
Height (mm)	500	530	870	2330	
Outflow external diameter (mm)	21.8	21.8	21.8	26.1	
Tap: right pitch (mm)	1.814	1.814	1.814	1.814	
Test pressure (bar)	31	31	31	33	

- Packaging technical characteristics are available upon request to the commercial department.
- Feasibility of filling packaging of the customers if they are in conformity with the legislation.
- Contact us for any other specific packaging.



STORAGE AND SHELF LIFE

Precautions for handling and storage :

French plants are controlled by the regulation of listed Establishments and have to comply with it (or with the local legislation).

- All packaging will be stored in a dry, well ventilated, easily accessible place, sheltered from sunlight and bad weather, away from any ignition source.
- It is recommended to store all packaging either in a specific place or isolated and sheltered by a fence.
- All packaging and piping will be grounded to discharge static electricity.
- Leak detectors, put at ground level, will be connected to an audible alarm, which will trigger in the event of leaks.
- The whole equipment will be tested with an appropriate leak detector before use.
- Material and electrical equipment in an explosive atmosphere will comply with the regulations (*grounding, equipotential bonding, ATEX material*).

Climalife can study the set up and assembling of your storage tanks, piping, and pumps, according to the prevailing regulations.



CONDITIONS OF USE

Please refer to the Material Safety Data Sheet (MSDS) before using the product.

Workers handling the product should be trained about risks and preventive measures.

The product is compatible with:

COMPATIBILITY	INCOMPATIBILITY
<p>Plastics:</p> <ul style="list-style-type: none">▪ Polyurethane▪ Polyvinyl chloride (PVC)▪ Polypropylene▪ Polyethylene▪ Teflon <p>Elastomers:</p> <ul style="list-style-type: none">▪ BUNA N[®]▪ Natural rubbers <p>Metals:</p> <ul style="list-style-type: none">▪ Ordinary steel▪ Stainless steel	<ul style="list-style-type: none">▪ Strong bases▪ Oxidizing agents

The information above is intended as a guide only. We assume no liability for its accuracy on its use. The user should make its own tests under its conditions in order to determine the suitability of any compound in a peculiar application.

Handle:

- away from heat sources (flames or hot metallic surfaces)
- in cool and aired premises

HEALTH SAFETY ENVIRONMENT (HSE)

Consult the Material Safety Datasheet (MSDS) on the website: www.quickfds.com

This data is based on information that the manufacturer believed to be reliable and offered in good faith. In no event will Climalife be responsible for special, incidental and consequential damages. The user is responsible, to the Administrative Authorities (Regulation of the listed establishments for the protection of the environment), for the conformity of his installation.