

New Gas Tetrafluoropropene (CHF=CHCF₃)

GENERAL PROPERTIES

Molecule	Honeywell HFO-1234ze Blowing Agent trans - 1,3,3,3-tetrafluoropropene
CAS #	1645 - 83 - 6
ELINCS # (EU)	471 - 480 - 0
Formula	trans - CHF=CHCF ₃
Molecular Weight	114
Boiling Point	- 19° C
Vapor Pressure @ 25° C	490 kPa
Vapor Pressure @ 55° C	1080 kPa
Liquid Density @ 25° C	1.18 gm/cm ³
Vapour Thermal Conductivity	13.0 mW / m• °K (@ 25°C)
Flame Limits	None to 30° C
Ozone Depletion Potential	Zero (non-ODS)
Global Warming Potential	6 (100 yr time horizon)

It can easily replace HFC- 134a

It is not flammable

It has a safe use

Environmental acceptability (low GWP)

**Compatibility with materials
commonly used**

Compatibility: The product does not present any particular problems of compatibility with materials (plastics and elastomers) and is similar to R134a

Security: HFO- 1234ze , the reference ambient temperature (21 ° C) is not flammable , according to the ASTM Method E-681 and the EU Test A-11

Very Preliminary

→ Results presented @RPC Pechino 2014

very preliminary and dedicated to large apparatuses

main focus on the streamer mode

→ Presently under study the binary mixture

Argon and Tetrafluoropropene

to explore the new gas potential

→ Very interesting for the Argon large amount in the mixture

and very critical for the avalanche streamer separation

→ Very sensitive FE electronics needed

→ For Phase2 working in progress

Necessita':

- Abbiamo acquistato gas
- Potrebbero servirci nuovi MFMs
- Ci potrebbero servire piu' gap di test