# Propellants

## R-152a

**R-152a:** Low GWP and non-VOC HFC propellant.

R-152a is a low GWP, non-VOC flammable HFC propellant. It is especially suitable for use in aerosol products for the US market, since it is not declared as VOC by EPA.

Furthermore, it's a propellant that is not affected by the f-gas regulation (517/2014) or by the Spanish law of special taxes on HFCs because its GWP is less than 150.

Technically speaking, thanks to its stability, compatibility with organic solvents as well as with water, it can be used in almost all aerosol uses.

### Chemical Name:

1,1-difuoroethane

### CAS number:

**75 - 37 - 6**

### Technical Characteristics:

> Colorless, odorless, low GWP, extremely flammable liquefied gas, not VOC declared by EPA.
> Good vapor pressure.
> Compatible with common organic solvents and water.
> Can be combined with both hydrocarbon propellants and dimethyl ether.
> Good chemical stability.

### Packaging:

- Cylinder
- Roll drum
- ISOtank

### Applications:

- Personal care (hairspray, deodorant, etc.)
- Industrial aerosols (especially polyurethane)
- Pinturas y barnices
- Home care products
- Technical aerosol

## Properties:

| Chemical Formula | CHF2-CH3 | |
|---|---|---|
| Molecular Weight | 66,05 | g/mol |
| Boiling Point | -24 | ºC |
| Vapor pressure (20ºC) | 4,1 | bar |
| Vapor pressure (50ºC) | 10,8 | bar |
| Liquid Density (20ºC) | 0,91 | kg/l |
| Liquid Density (50ºC) | 0,83 | kg/l |
| LEL (Lower Explosive Limit) | 3,9 | % volume |
| UEL (Upper Explosive Limit) | 18 | % volume |

## Table of temperature, pressure and density:

| Temperature (ºC) | Pressure (bar) | Liquid density (kg/l) |
|---|---|---|
| 0 | 1,6 | 0,959 |
| 5 | 2,1 | 0,948 |
| 10 | 2,7 | 0,936 |
| 15 | 3,4 | 0,924 |
| 20 | 4,1 | 0,912 |
| 25 | 5,0 | 0,899 |
| 30 | 5,9 | 0,887 |
| 35 | 6,9 | 0,873 |
| 40 | 8,1 | 0,860 |
| 45 | 9,4 | 0,846 |
| 50 | 10,8 | 0,831 |
| 55 | 12,3 | 0,815 |
| 60 | 14,0 | 0,799 |
| 65 | 15,8 | 0,782 |

## Normative:

GRIT (Gases Research Innovation & Technology) is committed to the continuous improvement of our inbuilt Quality Control, Environment and Major Accident Prevention Systems as well as close collaboration with our product and service providers. The scope of the system includes the packaging, commercialization, storage and innovation of technical gases and the management of residual fluorinated gas and halogenated solvents.

All this work is reflected in our certificates ISO 9001 & ISO 14001.

## More information:

If you want more information about our products, contact us.

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