

# Tetrafluoro methane

CF<sub>4</sub>

Carbon tetrafluoride R14

## Marking

CAS

Characterization acc. ADR

75-73-0  
UN 1982  
TETRAFLUOROMETHANE  
(REFRIGERANT GAS R  
14),2.2,(C/E)

Cylinder Marking



Shoulder color: bright green

## Essential properties

liquified gas, heavier than air, colorless, odorless

Symbols of risks



For additional safety information see safety data sheet \*-CF4-116

## Description

Colourless, nontoxic gas. In low concentrations odorless, in higher concentrations slightly etheric odor. Chemically und thermic very stable.

## Materials

Cylinders and valves: any usual materials  
Seals: PTFE, PVDF, PA, PP

| Physical Properties     |                   |  |  |
|-------------------------|-------------------|--|--|
| <b>molecular weight</b> | 88,005 kg/kmol    | <b>vapour pressure at 20°C</b>                   |  |
| <b>critical point</b>   |                   | <b>gas density at 0°C and 1,013 bar</b>          | 3,946 kg/m <sup>3</sup>                  |
| temperature             | 227,6 K           | <b>density ratio to air</b>                      | 3,052                                    |
| Pressure                | 37,4 bar          | <b>gas density at 15°C and 1 bar</b>             | 3,688 kg/m <sup>3</sup>                  |
| density                 | 0,630 kg/l        | <b>conversion factor</b>                         |  |
| <b>triple point</b>     |                   | liquid at Ts to m <sup>3</sup> gas (15°C, 1 bar) |  |
| temperature             | 89,56 K           | <b>virial coefficient</b>                        |  |
| Pressure                | 0,00109 bar       | Bn at 0°C  | -4,9*10 <sup>-3</sup> bar <sup>-1</sup>  |
| <b>boiling point</b>    |                   | B30 at 30°C                                      | -3,4*10 <sup>-3</sup> bar <sup>-1</sup>  |
| temperature             | 145,16 K; -128 °C | <b>gaseous state at 25°C and 1 bar</b>           |  |
| liquid density          | 1,6096 kg/l       | specific heat capacity cp                        | 0,6954 kJ/kg K                           |
| evaporation heat        | 134,20 kJ/kg      | thermal conductivity                             | 158*10 <sup>-4</sup> W/m K               |
|                         |                   | dynam. viscosity                                 | 17,41*10 <sup>-6</sup> Ns/m <sup>2</sup> |