

# Hexafluoro ethane



Perfluoroethane R116

## Marking

CAS

Characterization acc. ADR

76-16-4  
UN 2193  
HEXAFLUOROETHANE  
(REFRIGERANT GAS R 116),  
2.2, (C/E)

Cylinder Marking



Shoulder color: bright green

## Essential properties

liquified gas, heavier than air, colorless, odorless

## Symbols of risks



## Physical Properties

molecular weight	138,012 kg/kmol
gas density at 0°C and 1,013 bar	6,2474 kg/m <sup>3</sup>
density ratio to air	4,832

For additional safety information see safety data sheet \*-C2F6-064

## Valves / Manifolds

Valve connection

acc. to national regulations

Recommended Manifolds

Spectropur



Specification / receptacles			
		Hexafluoroethane UHP	
<b>Composition</b>			
C <sub>2</sub> F <sub>6</sub>	≥	99.999	Vol.-%
<b>Impurities</b>			
CO <sub>2</sub>	≤	1	ppmv
CO	≤	1	ppmv
H <sub>2</sub> O	≤	2	ppmv

## Remarks

Hexafluoro ethane is a greenhouse gas acc. to EU 517/2014, annex 1, group 2.  
GWP = 12.200

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## Description

Colourless, odorless gas, heavier than air. Stable and poorly reactive.

## Materials

Cylinders and valves: any usual materials

Seals: PTFE, PVDF, PA, PP, IIR, NBR, CR, FKM, Q, EPDM

Physical Properties			
molecular weight	138,012 kg/kmol	vapour pressure at 20 °C	
critical point		gas density at 0 °C and 1,013 bar	6,2474 kg/m <sup>3</sup>
temperature	293,035 K	density ratio to air	4,832
Pressure	30,42 bar	gas density at 15 °C and 1 bar	5,83 kg/m <sup>3</sup>
density	0,622 kg/l	conversion factor	
triple point		liquid at Ts to m <sup>3</sup> gas (15 °C, 1 bar)	
temperature	173,13 K	virial coefficient	
Pressure	0,26490 bar	Bn at 0 °C	-14,2*10 <sup>-3</sup> bar <sup>-1</sup>
boiling point		B30 at 30 °C	-9,94*10 <sup>-3</sup> bar <sup>-1</sup>
temperature	194,90 K; -78,3 °C	gaseous state at 25 °C and 1 bar	
liquid density	1,608 kg/l	specific heat capacity cp	
evaporation heat	117 kJ/kg	thermal conductivity	46*10 <sup>-4</sup> W/m K (0 °C)
		dynam. viscosity	14,48*10 <sup>-6</sup> Ns/m <sup>2</sup>