

## Marking

CAS

Characterization acc. ADR

Cylinder Marking

7727-37-9  
UN 1066 NITROGEN,  
COMPRESSED, 2.2, (E)



Shoulder color: black

## Essential properties

compressed gas, lighter than air, colorless, odorless

## Symbols of risks



## Physical Properties

molecular weight	28,0134 kg/kmol
gas density at 0°C and 1,013 bar	1,250 kg/m <sup>3</sup>
density ratio to air	0,9671

For additional safety information see safety data sheet \*-N2-089A

## Valves / Manifolds

Valve connection

200 bar: acc. to national regulations  
300 bar: ISO 5145 Nr. 1: W 30 x 2

Recommended Manifolds

Spectrolab FM 51 / FM 52exact  
Spectrochem FE 51 / FE 52exact  
300 bar pressure regulator under same designation available



Specification / receptacles						
		Nitrogen 5.0	Nitrogen 5.5 *	Nitrogen ECD	Nitrogen 6.0	
<b>Composition</b>						
N <sub>2</sub> incl. noble gases	≥	99.999	99.9995	99.9995	99.9999	Vol.-%
<b>Impurities</b>						
O <sub>2</sub>	≤	2	0.5	0.5	0.3	ppmv
H <sub>2</sub>	≤	-	0.5	-	0.1	ppmv
HC (as CH <sub>4</sub> )	≤	0.1	0.1	0.1	0.1	ppmv
H <sub>2</sub> O	≤	3	2	2	0.5	ppmv
CO + CO <sub>2</sub>	≤	-	0.5	0.1	0.3	ppmv
halogenated HC	≤	-	-	1	-	ppbv
<b>Cylinder / Contents</b>						
F 10 200 bar		1.9	1.9	-	1.9	m <sup>3</sup>
F 50 200 bar		9.6	9.6	9.6	9.6	m <sup>3</sup>
F 50 300 bar		13.1	-	-	-	m <sup>3</sup>
F 50*12 200 bar		114.7	-	-	-	m <sup>3</sup>
F 50*12 300 bar		157.0	-	-	-	m <sup>3</sup>
MegaPack4 200 bar		114.7	-	-	-	m <sup>3</sup>
MegaPack4 300 bar		157.0	-	-	-	m <sup>3</sup>

## Remarks

Applications:

Carrier gas in gas chromatography

Zero gas for analytical applications, especially in automotive industries

Component of gas mixtures for CO<sub>2</sub>-lasers

Inert gas in chemical and pharmaceutical industries

Content in m<sup>3</sup> at 15°C, 1 bar

\*: not in each country available

**MESSER** 

Gases for Life

Messer Group GmbH

Messer-Platz 1

65812 Bad Soden

<https://www.messergroup.com>

## Marking

CAS

Characterization acc. ADR

Cylinder Marking

7727-37-9  
UN 1066 NITROGEN,  
COMPRESSED, 2.2, (E)



Shoulder color: black

## Essential properties

compressed gas, lighter than air, colorless, odorless

## Symbols of risks



For additional safety information see safety data sheet \*-N2-089A

## Description

Colourless, odorless, inert gas. In closed rooms the breathing air is displaced (danger of asphyxiation!); no warning symptoms!

## Materials

Cylinders and valves: any usual materials

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

Physical Properties			
molecular weight	28,0134 kg/kmol	vapour pressure at 20°C	
critical point		gas density at 0°C and 1,013 bar	1,250 kg/m <sup>3</sup>
temperature	126,260 K	density ratio to air	0,9671
Pressure	34,10 bar	gas density at 15°C and 1 bar	1,1694 kg/m <sup>3</sup>
density	0,3140 kg/l	conversion factor	
triple point		liquid at Ts to m <sup>3</sup> gas (15°C, 1 bar)	0,691
temperature	63,150 K	virial coefficient	
Pressure	0,1246 bar	Bn at 0°C	-0,47*10 <sup>-3</sup> bar <sup>-1</sup>
boiling point		B30 at 30°C	-0,17*10 <sup>-3</sup> bar <sup>-1</sup>
temperature	77,36 K; -196 °C	gaseous state at 25°C and 1 bar	
liquid density	0,8085 kg/l	specific heat capacity cp	1,040 kJ/kg K
evaporation heat	198,6 kJ/kg	thermal conductivity	256,6*10 <sup>-4</sup> W/m K
		dynam. viscosity	17,9*10 <sup>-6</sup> Ns/m <sup>2</sup>