

**Marking**

|                                  |  |
|----------------------------------|--|
| <b>CAS-Number</b>                | 7440-59-7                                    |
| <b>Characterization acc. ADR</b> | UN 1046, Helium, compressed, 2.2 Class 2, 1A |

**Cylinder Marking**

shoulder:  
brown

**Essential properties**

Colourless, odorless rare gas, compressed, very much lighter than air

**Symbols of Risks**

gas, compressed

**Physical Properties**

|                                   |                          |
|-----------------------------------|--------------------------|
| molecular weight:                 | 4,0026 kg/kmol           |
| gas density at 0°C and 1,013 bar: | 0,1785 kg/m <sup>3</sup> |
| density ratio to air:             | 0,1380                   |

For additional safety information see Material-/safety data sheet No. \*-HE-061A

**Valves / Manifolds**

**Valve connection** 200 bar: acc. to national standards  
300 bar: ISO 5145 Nr. 1: W 30 x 2

**Recommended Manifolds** Spectrolab FM 51 / FM 52exact  
Spectrochem FE 51 / FE 52exact

**Specifications / Forms of delivery**

|                             |   | 4.6    | 5.0    | 5.6 *   | ECD     | 6.0     |                |
|-----------------------------|---|--------|--------|---------|---------|---------|----------------|
| <b>Composition</b>          |   |        |        |         |         |         |                |
| He                          | > | 99,996 | 99,999 | 99,9996 | 99,9996 | 99,9999 | Vol.-%         |
| <b>Impurities</b>           |   |        |        |         |         |         |                |
| H <sub>2</sub> O            | < | 5      | 3      | 2       | 2       | 0,5     | ppmv           |
| O <sub>2</sub>              | < | 5      | 1      | 1       | 1       | 0,5     | ppmv           |
| N <sub>2</sub>              | < | 20     | 4      | 1       | 1       | 0,5     | ppmv           |
| THC (as CH <sub>4</sub> )   | < | 1      | 0,2    | 0,1     | 0,1     | 0,1     | ppmv           |
| CO + CO <sub>2</sub>        | < | -      | -      | 0,1     | -       | 0,1     | ppmv           |
| hal. HC                     | < | -      | -      | -       | 1       | -       | ppbv           |
| <b>Cylinders / Contents</b> |   |        |        |         |         |         |                |
| F 05 200 bar *              |   | 0,9    | -      | -       | -       | -       | m <sup>3</sup> |
| F 10 200 bar                |   | 1,8    | 1,8    | -       | -       | 1,8     | m <sup>3</sup> |
| F 20 200 bar *              |   | 3,7    | -      | -       | -       | -       | m <sup>3</sup> |
| F 50 200 bar                |   | 9,2    | 9,2    | 9,2     | 9,2     | 9,2     | m <sup>3</sup> |
| F 50 300 bar                |   | 13,2   | 13,2   | -       | -       | -       | m <sup>3</sup> |
| B 12 * F 50 200 bar         |   | 110,4  | 110,4  | -       | -       | -       | m <sup>3</sup> |
| B 12 * F 50 300 bar         |   | 158,1  | 158,1  | -       | -       | -       | m <sup>3</sup> |

**Remarks**

Applications:  
Carrier gas for gas chromatography,  
cooling gas for production of optical fibers,  
leak detection,  
filling gas for air bags,  
component for diving mixtures,  
shielding gas,  
laser welding,  
metallurgy,  
meteorology (weather balloons),  
reactor cooling gas,  
aeronautics,  
laser technology.

\*: not available in each country