

**Marking****CAS**

Characterization acc. ADR

**Cylinder Marking**2551-62-4  
UN 1080 SULPHUR  
HEXAFLUORIDE, 2.2, (C/E)

Shoulder color: bright green

**Essential properties**

liquified gas, heavier than air, colorless, odorless

**Symbols of risks****Physical Properties**

|  |                         |
|--|-------------------------|
| molecular weight                               | 146,05 kg/kmol          |
| gas density at 0°C and 1,013 bar               | 6,626 kg/m <sup>3</sup> |
| density ratio to air                           | 5,125                   |
| vapour pressure at 20°C                        | 21,080 bar              |
| GWP (CO <sub>2</sub> = 1) acc.to 517/2014 (EU) | 22800                   |

For additional safety information see safety data sheet \*-SF6-110

**Valves / Manifolds****Valve connection**

acc. to national regulations

**Recommended Manifolds**

Spectrolab FM 51 / FM 52exact



| Specification / receptacles |   |                          |        |
|-----------------------------|---|--------------------------|--------|
|                             |   | Sulphur hexafluoride 3.0 |        |
| <b>Composition</b>          |   |                          |        |
| SF <sub>6</sub>             | ≥ | 99.9                     | Vol.-% |
| <b>Impurities</b>           |   |                          |        |
| HF                          | ≤ | 1                        | ppmv   |
| CF <sub>4</sub>             | ≤ | 500                      | ppmv   |
| air gases                   | ≤ | 500                      | ppmv   |
| H <sub>2</sub> O            | ≤ | 10                       | ppmv   |
| <b>Cylinder / Contents</b>  |   |                          |        |
| F 10 10kg                   |   | 10.0                     | kg     |
| F 40 40kg                   |   | 40.0                     | kg     |
| F 50 52kg                   |   | 52.0                     | kg     |

**Remarks****Applications:**

Insulating gas in high voltage circuit breakers, switchgear, and other electrical equipment  
 Insulating gas in high voltage supplies of particle accelerators and high voltage transmission electron microscopes

Sulphur hexafluoride is a greenhouse gas acc. to EU 517/2014, annex 1, group 3.  
 GWP = 22.800

**Marking**

CAS

Characterization acc. ADR

Cylinder Marking

2551-62-4  
UN 1080 SULPHUR  
HEXAFLUORIDE, 2.2, (C/E)

Shoulder color: bright green

**Essential properties**

liquefied gas, heavier than air, colorless, odorless

**Symbols of risks**

For additional safety information see safety data sheet \*-SF6-110

**Description**

Colourless, odorless, liquefied gas. Chemically and thermally very stable. At electrical discharges very corrosive and highly toxic decomposition products are generated.

**Materials**

Cylinders and valves: all usual materials

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

| Physical Properties |                    |   |  |
|---------------------|--------------------|---|--|
| molecular weight    | 146,05 kg/kmol     | vapour pressure at 20 °C                          |  |
| critical point      |                    | gas density at 0 °C and 1,013 bar                 | 6,626 kg/m <sup>3</sup>                  |
| temperature         | 318,700 K          | density ratio to air                              | 5,125                                    |
| Pressure            | 37,590 bar         | gas density at 15 °C and 1 bar                    | 6,180 kg/m <sup>3</sup>                  |
| density             | 0,740 kg/l         | conversion factor                                 |  |
| triple point        |                    | liquid at Ts to m <sup>3</sup> gas (15 °C, 1 bar) |  |
| temperature         | 222,35 K           | virial coefficient                                |  |
| Pressure            | 2,258 bar          | Bn at 0 °C  | -15,2*10 <sup>-3</sup> bar <sup>-1</sup> |
| boiling point       |                    | B30 at 30 °C                                      | -10,8*10 <sup>-3</sup> bar <sup>-1</sup> |
| temperature         | 209,23 K; -63,9 °C | gaseous state at 25 °C and 1 bar                  |  |
| liquid density      | Sublimationspunkt  | specific heat capacity cp                         | 0,6580 kJ/kg K                           |
| evaporation heat    | 153,20 kJ/kg       | thermal conductivity                              | 135*10 <sup>-4</sup> W/m K               |
|                     |                    | dynam. viscosity                                  | 15,66*10 <sup>-6</sup> Ns/m <sup>2</sup> |