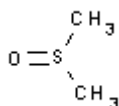


**PRODUCT CODE: 191954****Dimethyl Sulfoxide (USP, BP, Ph. Eur.) pharma grade**

C₂H₆OS

M.= 78,13

CAS [67-68-5]

EINECS 200-664-3

TARIC 2930 90 98 99

SYNONYMS: DMSO, Methylsulphoxide, Sulphinylbismethane**PHYSICAL DATA:** liquid, Clear, Colourless, Miscible with water • Hygroscopic • D 20/4 1,1014 • M.P.: 18,4 °C • B.P.: 189 °C • n₂₀/D : 1,477 • Ign. T.:270 °C • Vap. press. (20 °C) 0,6 hPa • Viscosity 20 °C 2 mPa.s • D. M. 20 °C 3,9 Debye • Dielec. constant 20 °C 4,7 •**BIBLIOGRAPHY:** Merck Index **13**, 3.285 Sax **DUD800** • Safety **2**, **2440 C** • Kühn-Birett **D 36** • Ullmann **(5.)9**, 243 • Beilstein **1**, **289 II**, **277 III**, **1217 IV**, **1277** • BRN 506008 • Fieser **1296 2157 3119 4192 5263 6225 7133 8198 9189 10166 11214 12213 13124** • ACS **XI** • BP.**2018** • USP **41** • Ph. Eur. **8.0** (2014) **9.0** (2017) • Royal Decree **I811** •**HAZARDOUS:** RTECS: PV 6210000 • LD₅₀ oral rat 14.500 mg/kg • LD₅₀ skn rat 40.000 mg/kg • LD₅₀ ipr mus 2.500 mg/kg**WEIGHT/VOLUME INFORMATION:** 1l~1,103 kg 1kg~0,907 l**OBSERVATIONS:** Storage away from direct light. •**SPECIFICATIONS:**Minimum assay (G.C.)
Identity :

99,9%

Identity according to Pharmacopoeias:	passes test
Density at 25/25	1,095-1,101
Density at 20/20	1,100-1,104
Freezing point	$\geq 18,3^{\circ}\text{C}$
Refractive Index $n_{20/D}$	1,478-1,480
Refractive Index $n_{25/D}$	1,4755-1,4775

Maximum limit of impurities

Acidity	passes test
Non-volatile matter	0,01 %
Absorbance (UV)	passes test
Related substances (G.C.)	0,1 %
Substances darkened by KOH	passes test
Residual solvents (Ph.Eur/USP)	passes test
Dimethyl Sulfone (G.C.)	0,03%
Water (H ₂ O)	0,1 %

Elemental impurities (ICH Q3D):

Class 1	
Cd	0,5 ppm
Pb	0,5 ppm
As	1,5 ppm
Hg	1,5 ppm
Class 2A	
Co	5 ppm
V	10 ppm
Ni	20 ppm
Class 2B	
Tl	0,8 ppm
Au	10 ppm
Pd	10 ppm
Ir	10 ppm
Os	10 ppm
Rh	10 ppm
Ru	10 ppm
Se	15 ppm
Ag	15 ppm
Pt	10 ppm
Class 3	
Li	55 ppm
Sb	120 ppm
Ba	140 ppm
Mo	25 ppm
Cu	250 ppm
Sn	600 ppm
Cr	25 ppm