

Product Information

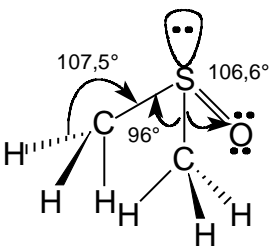
Physico-chemical properties of DMSO

CAS : 67-68-5 EINECS : 200-664-3

With its high polarity combined with a high dielectric constant, dimethylsulfoxide (DMSO) is an excellent solvent for polar or polarizable organic compounds, but also for many acids, alkalis and mineral salts.

Furthermore, DMSO has a high flash point, shows low toxicological - ecotoxicological profiles and is biodegradable : dimethylsulfoxide is a non-labelled chemical.

Involved in synthesis and formulation applications ? Use DMSO !

Physical properties 	Molecular Weight (g/mol)	78.13
	Boiling point (°C, 760 mmHg)	189
	Freezing point (°C)	18.5
	Specific gravity (20/4)	1.1
	Autoignition temperature (°C)	300-302
	Refractive index (25°C)	1.478
	Cubic expansion coef. (°C⁻¹)	9,28.10⁻⁴
	Absolute Viscosity (cP, 20°C)	2.14
	Surface tension (dyne/cm, 20°C)	43.0
	Flammability limits in air (v/v)	2.6% 28.5%
	pKa	33
	Relative density/air	2.7
	Flash point (°C closed cup)	87
	Aqueous effluents	Solubility in water (wt/wt, 25°C)
	Log₁₀ partition in octanol/water	-1.35
Vapor pressure	Henry's constant Pa.m³/mole	7,84.10⁻⁴
	Vapor pressure (mmHg, 20°C)	0.55
Solvent properties	Dielectric constant 20°C	48.9
	Dipole moment (Debye, 25°C)	4.3
	Conductivity (ohm⁻¹m⁻¹, 20°C)	3.10⁻⁶
	Hansen parameters	Mpa^{1/2}
	Hansen polarity parameter	18.4
	Hansen dispersion parameter	16.4
	Hansen hydrogen parameter	10.2
	Hildebrand parameter	26.7
	Kauri butanol value (ASTM D1133-78)	164
Thermodynamics	Heat capacity,(J K⁻¹ mol⁻¹)	153..27
	Heat of combustion (KJ/mol, 25 °C)	-1977.7
	Heat of fusion (KJ/mol)	14.352
	Heat of vaporization ((KJ/mol, 25 °C)	52.26
	Heat of formation (KJ/mol, 25 °C)	-203.89
	Molar volume (cm³/mol)	71.3

