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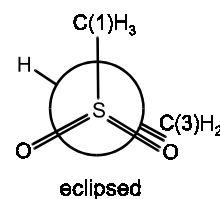
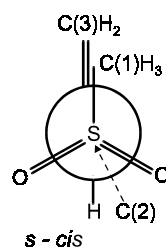
C₃H₆O₂S

Methyl vinyl sulfone

C_s (*s-cis*)
C₁ (eclipsed)
H₃C–SO₂–CH=CH₂

r_a	Å ^{a)}	θ_a	deg ^{a)}
C(2,3)–H	1.093 ^{b)}	C=C–S	118.4(21)
C(1)–H	1.104 ^{b)}	C–S–C	103.2(16)
C=C	1.347(16)	C(2)–S=O	110.0(15)
S=O	1.429(4)	O=S=O	120.0(15)
S–C(1)	1.776 ^{b)}	C=C–H	123.0 ^{b)}
S–C(2)	1.774(8)	S–C–H	110.0 ^{b)}

Two conformers exist in the gas phase (see figure): the *s-cis* conformer with $\phi[\text{C}(1)\text{--S--C}(2)=\text{C}(3)] = 0^\circ$ and the eclipsed conformer with $\phi \approx 100^\circ$. The ratio of the conformers is close to equimolecular. The temperature of the measurement was $\approx 80^\circ\text{C}$.



^{a)} Three times the estimated standard errors.

^{b)} Fixed.

Naumov, V.A., Ziatdinova, R.N., Berdnikov, E.A.: Zh. Strukt. Khim. **22** No. 3 (1981) 89;
Russ. J. Struct. Chem. (Engl. Transl.) **22** (1981) 382.