

1846
ED

$\text{C}_4\text{H}_{12}\text{Cl}_2\text{Si}_2$

1,2-Dichloro-1,1,2,2-tetramethyldisilane C_2 (skeleton) (*gauche*)
 C_{2h} (skeleton) (*anti*)
 $(\text{CH}_3)_2\text{ClSi}-\text{SiCl}(\text{CH}_3)_2$

r_a	\AA^a	θ_a	deg a
Si-Si	2.338(13)	Si-Si-Cl	107.7(6)
Si-Cl	2.077(2)	Si-Si-C	109.8(7)
Si-C	1.860(3)	Si-C-H	111.0(16)
C-H	1.104(9)	C-Si-Cl b	106.4(11)
		C-Si-C b	116.4(32)
		H-C-H b	107.9(16)
		α c	129.2(33)
		τ (<i>gauche</i>) d	76.5(25)
		twist (CH_3) e	71.0(74)

The more stable conformer in the vapour seems to be *gauche* (83(11)%).

$\Delta S = S(\text{gauche}) - S(\text{anti}) = 14 \text{ cal mol}^{-1} \text{ K}^{-1}$. $\Delta E = E(\text{gauche}) - E(\text{anti}) = -0.6(5) \text{ kcal mol}^{-1}$.

The nozzle temperature was 40 °C.

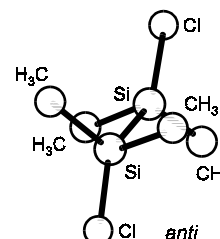
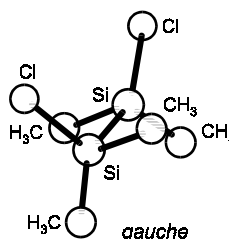
a) Estimated standard errors including a systematic error.

b) Dependent angle.

c) Projected C-Si-C angle.

d) Cl-Si-Si-Cl torsional angle, $\tau = 0^\circ$ for the *syn* position.

e) Twist angle of the methyl group, 60° for the staggered conformation.



Kveseth, K.: Acta Chem. Scand. Ser. A **33** (1979) 453.