

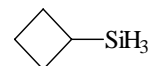
1828  
ED

**C<sub>4</sub>H<sub>10</sub>Si**

**Cyclobutylsilane**

**C<sub>s</sub> (equatorial)  
C<sub>s</sub> (axial)**

<i>r<sub>a</sub></i>	Å <sup>a)</sup>	<i>θ<sub>a</sub></i>	deg <sup>a)</sup>
C(1)–C(2)	1.573(4)	C(2)–C(1)–C(4)	88.5(8)
C(2)–C(3)	1.557(4)	H–Si–H	110.9(20)
Si–C(1)	1.873(3)	H–C–H	114.0(22)
C–H	1.126(8)	<i>α</i> (eq) <sup>b)</sup>	132.0(31)
Si–H	1.474(9)	<i>α</i> (ax) <sup>b)</sup>	123.6(37)
		<i>φ</i> (eq) <sup>c)</sup>	31.8(30)
		<i>φ</i> (ax) <sup>c)</sup>	–23.3(41)



Amount of the equatorial conformer: 59(5)%.

$\Delta G = G(\text{ax}) - G(\text{eq}) = 0.8(4) \text{ kJ mol}^{-1}$ .

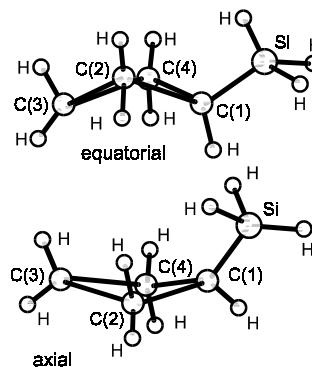
The silyl group is allowed to rotate during ring inversion as shown in the figure.

The nozzle temperature was 20 °C.

<sup>a)</sup> Three times the estimated standard errors including a systematic error.

<sup>b)</sup> Angle between the Si–C(1) bond and the C(2)C(1)C(4) plane.

<sup>c)</sup> Puckering angle.



Dakkouri, M., Oberhammer, H.: J. Mol. Struct. **102** (1983) 315.