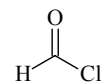


72
CRD**CHClO****Formyl chloride****C_i**

State	$\tilde{A}^1A''^a)$
Energy [eV]	4.242
$r(C=O)$ [Å]	1.301
$\theta(\varphi)^b$ [deg]	25
$\theta(Cl-C=O)$ [deg]	109.0



HClCO was produced by flowing formic acid over powdered PCl_5 and purified by distillation. A steady flow of HClCO was maintained through a cavity ring-down spectrometer and bands of near ultraviolet absorption system were recorded. Three bands, 6^1 , 5^16^1 and $2^15^16^1$, showed α -type selection rules. However, since the $2^15^16^1$ band showed the clearest rotational structure, it was analyzed to obtain the molecular parameters given in the table.

^{a)} All values refer to the $2^15^16^1$ level. The following values were assumed: $r(C-Cl) = 1.76$ Å, $r(C-H) = 1.10$ Å, $\theta(H-C=O) = 113.5^\circ$.

^{b)} Angle between the C-H bond and the ClCO plane.

Ding, H., Orr-Ewing, A.J., Dixon, R.N.: Phys. Chem. Chem. Phys. **1** (1999) 4181.

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