

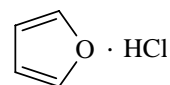
1584
MW

C₄H₅ClO

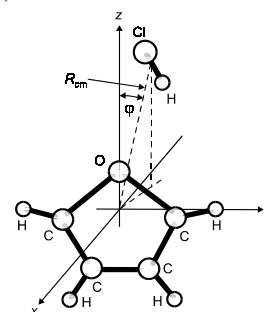
Furan – hydrogen chloride (1/1)
(weakly bound complex)

C_{2v}
(effective symmetry class)
(large-amplitude motion
of the H atom in HCl)

Isotopic species	$r_0(R_{\text{cm}})$ (B) ^{a)} [Å] ^{b)}	$r_0(R_{\text{cm}})$ (C) ^{a)} [Å] ^{b)}	$r_0(\text{O}\cdots\text{Cl})$ (B) ^{a)} [Å] ^{b)}	$r_0(\text{O}\cdots\text{Cl})$ (C) ^{a)} [Å] ^{b)}
Furan · H ³⁵ Cl	4.3588(100)	4.3686(100)	3.2600(100)	3.2698(100)
Furan · H ³⁷ Cl	4.3609(100)	4.3700(100)	3.2603(100)	3.2694(100)
Furan · D ³⁵ Cl	4.3216(100)	4.3305(100)	3.2555(100)	3.2644(100)



Isotopic species	$\theta_0(\varphi_b)$ ^{c)} [deg]	$\theta_0(\varphi_c)$ ^{c)} [deg]
Furan · H ³⁵ Cl	17.09(8)	15.47(11)
Furan · H ³⁷ Cl	16.75(22)	15.86(36)
Furan · D ³⁵ Cl	15.45(16)	14.75(26)



^{a)} (B) and (C) denote the parameters which were calculated from the B and C rotational constants, respectively.

^{b)} The uncertainties for the interatomic distances were not estimated in the original paper.

^{c)} φ_b and φ_c denote the in-plane and out-of-plane bending angles of HCl, respectively. Average angles.

Shea, J.A., Kukolich, S.G.: J. Chem. Phys. **78** (1983) 3445.