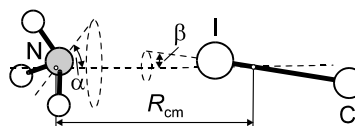


133  
MW**ClH<sub>3</sub>IN****Ammonia – iodine chloride (1/1)**  
(weakly bound complex)**C<sub>3v</sub>**  
(effective symmetry class)  
(large-amplitude motion)NH<sub>3</sub> · ICl

Isotopic species	$r_0(R_{\text{cm}})$ [Å]	$r_0(\text{N} \cdots \text{I})$ [Å]	$\theta_0(\alpha_{\text{av}})$ <sup>a)</sup> [deg]	$\theta_0(\beta_{\text{av}})$ <sup>a)</sup> [deg]
H <sub>3</sub> <sup>14</sup> N · I <sup>35</sup> Cl	3.279(2)	2.711(2)	15(10)	4(1)
H <sub>3</sub> <sup>14</sup> N · I <sup>37</sup> Cl	3.304(2)	2.714(2)	15(10)	4(1)
H <sub>3</sub> <sup>15</sup> N · I <sup>35</sup> Cl	3.272(2)	2.707(2)	15(10)	4(1)

The equilibrium geometry of the complex is one of C<sub>3v</sub> symmetry, with the nuclei in the order H<sub>3</sub>N...ICl. The intermolecular stretching force constant is 30.4 N m<sup>-1</sup>, indicating that the complex is strongly bound.

<sup>a)</sup> See figure for the definition. Average values.



Waclawik, E.R., Legon, A.C.: Phys. Chem. Chem. Phys. **1** (1999) 4695.