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MW**C₂H₂ClF****Acetylene – chlorine fluoride (1/1)**
(weakly bound complex)**C_{2v}**
(effective symmetry class)
(large-amplitude motion)
HC≡CH · ClF

Isotopic species	$r_0(R_{\text{cm}})$ [Å]	$r_0(\text{cm} \dots \text{Cl})^{\text{a}}$ [Å]	$\theta_0(\alpha_{\text{av}})^{\text{b}}$ [deg]	$\theta_0(\beta_{\text{av}})^{\text{b}}$ [deg]	k_{σ}^{c} [N m ⁻¹]
C ₂ H ₂ · ³⁵ ClF	3.443(4)	2.873(8)	78(4)	7(3)	10.01
C ₂ H ₂ · ³⁷ ClF	3.422(4)	2.873(8)	78(4)	7(3)	10.03
C ₂ D ₂ · ³⁵ ClF	3.439(4)	2.869(8)	80(4)	7(3)	10.0

^a) cm denotes the center of acetylene.^b) See figure for the definition.^c) Intermolecular stretching force constant.Hinds, K., Holloway, J.H., Legon, A.C.: J. Chem. Soc., Faraday Trans. **92** (1996) 1291.