

1816
MW

$\text{C}_4\text{H}_{10}\text{N}_2$

Trimethylamine – hydrogen cyanide (1/1)
(weakly bound complex)

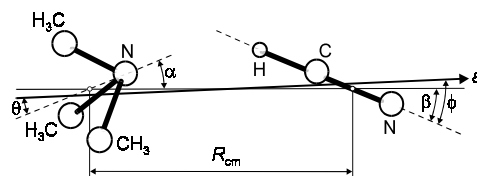
C_{3v}
(effective symmetry class)
 $(\text{H}_3\text{C})_3\text{N} \cdot \text{HC}\equiv\text{N}$

Isotopic species	θ_{av} [deg]	ϕ_{av} [deg]	$r_0(\langle R_{\text{cm}} \rangle^{1/2})$ [Å] ^{a)}	$r_0(\text{N}\dots\text{C})$ [Å] ^{a)}	k_s ^{b)} [N m ⁻¹]	ν_s ^{c)} [cm ⁻¹]
$(\text{CH}_3)_3^{14}\text{N} \cdot \text{HC}^{14}\text{N}$	13.4(2)	9.1(4)	4.0065(30)	3.1035(30)	14.73	116.1
$(\text{CH}_3)_3^{14}\text{N} \cdot \text{HC}^{15}\text{N}$	13.29(6)		4.0280(30)	3.1038(30)	14.24	112.8
$(\text{CH}_3)_3^{14}\text{N} \cdot \text{DC}^{15}\text{N}$	12.8(2)		3.9721(30)	3.1035(30)	14.66	113.1

^{a)} Uncertainties are larger than those of the original data.

^{b)} Force constant for the hydrogen-bond stretching.

^{c)} $\nu_s = (2\pi c)^{-1}(k_s/\mu)^{1/2}$.



Rego, C.A., Batten, R.C., Legon, A.C.: J. Chem. Phys. **89** (1988) 696.