



>>Entry Name: Cyanoguanidine, 9CI

Synonym(s): Dicyandiamide. Dicyanodiamide

CAS Registry Number: 461-58-5

$(\text{H}_2\text{N})_2\text{C}=\text{NCN}$

Molecular Formula: $\text{C}_2\text{H}_4\text{N}_4$

Molecular Weight: 84.08

Accurate Mass: 84.043596

Percentage Composition: C 28.57%; H 4.79%; N 66.63%

General Statement: The neutral imino form illus. is said to be the exclusive tautomer in soln. and in the solid state

Source/Synthesis: Formed from cyanamide and $\text{OH}^{(-)}$

Use/Importance: Commercially available. Used in plastics and pharmaceutical industries and in heterocyclic synth.

Physical Description: Prisms (H_2O)

Melting Point: Mp 209.5°

Solubility: Mod. sol. H_2O , EtOH, liq. NH_3 ; insol. Et_2O , C_6H_6

Other Data: Forms salts with many metals. The mono-K salt is sol. in H_2O and the di-K salt spar. sol.

Aldrich: D7660-9

Fluka: 36600

Sigma: D8275

References:

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Hughes, E.W., *J.A.C.S.*, 1940, **62**, 1258, (struct)

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Jones, W.J. *et al.*, *Trans. Faraday Soc.*, 1959, **55**, 193, (ir)

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Hirshfeld, F.L. *et al.*, *Acta Cryst. B*, 1980, **36**, 406, (struct)

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