



>>Entry Name: Thioformamide

Synonym(s): Methanethioamide

CAS Registry Number: 115-08-2

HC(S)NH₂

Molecular Formula: CH₃NS

Molecular Weight: 61.107

Accurate Mass: 60.998619

Percentage Composition: C 19.66%; H 4.95%; N 22.92%; S 52.47%

Use/Importance: Intermed. for synth. of thiazoles

Physical Description: Prisms (EtOAc or Et₂O/petrol)

Melting Point: Mp 32-33.8° (28-29°)

Solubility: V. sol. EtOH, EtOAc; sol. Et₂O; insol. petrol, CHCl₃, C₆H₆

>>Derivative: *N,N*-Di-Me

Synonym(s): *N,N*-Dimethylmethanethioamide, 9Cl. *N,N*-Dimethylthioformamide, 8Cl

CAS Registry Number: 758-16-7

Molecular Formula: C₃H₇NS

Molecular Weight: 89.161

Accurate Mass: 89.029919

Percentage Composition: C 40.41%; H 7.91%; N 15.71%; S 35.96%

Use/Importance: Reacts with amides to give formamidines, can be used in Vilsmeier reactions

Physical Description: Liq.

Boiling Point: Bp₁₁ 93°

Aldrich: 16364-3

Fluka: 41668

>>Derivative: *N*-Et

CAS Registry Number: 22629-25-0

Molecular Formula: C₃H₇NS

Molecular Weight: 89.161

Accurate Mass: 89.029919

Percentage Composition: C 40.41%; H 7.91%; N 15.71%; S 35.96%

Boiling Point: Bp₁₄ 125°

References:

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Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **1**, 1335A, (*nmr*)
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Willstätter, R., *Ber.*, 1909, **42**, 1908-1922, (*di-Me*)
Petit, G.R., *Can. J. Chem.*, 1965, **43**, 2640-2644, (*bibl, di-Me*)
Tull, R. *et al.*, *Angew. Chem., Int. Ed.*, 1969, **8**, 278-279, (*synth*)
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Rohaly, J. *et al.*, *Org. Prep. Proced. Int.*, 1999, **31**, 693-694, (*synth*)
Kantlehner, W. *et al.*, *J. Prakt. Chem.*, 2000, **342**, 682-699, (*di-Me*)