Melting Point: Mp 125°
Solubility: Spar. sol. cold H_2O; sol. hot H_2O
Other Data: Heat → imide

>>**Derivative:** Diamide
Synonym(s): 2,2'-Thiobisacetamide

CAS Registry Number: 14618-65-6
Molecular Formula: $C_4H_8N_2O_2S$
Molecular Weight: 148.185
Accurate Mass: 148.030648
Percentage Composition: C 32.42%; H 5.44%; N 18.90%; O 21.59%; S 21.64%
Physical Description: Cryst.
Melting Point: Mp 161-162°

Rare Chemicals Library: S36503-3

>>**Derivative:** Bis(methylamide)

Molecular Formula: $C_6H_{12}N_2O_2S$
Molecular Weight: 176.239
Accurate Mass: 176.061948
Percentage Composition: C 40.89%; H 6.86%; N 15.90%; O 18.16%; S 18.19%
Melting Point: Mp 118-119°

>>**Derivative:** Dinitrile
Synonym(s): 2,2'-Thiobisacetonitrile, 9CI. 1,1'-Dicyanodimethyl sulfide. Bis(cyanomethyl) sulfide

CAS Registry Number: 5848-75-9
Molecular Formula: $C_4H_4N_2S$
Molecular Weight: 112.155
Accurate Mass: 112.009518
Percentage Composition: C 42.84%; H 3.59%; N 24.98%; S 28.59%
Physical Description: Cryst. (EtOH)
Melting Point: Mp 47.5°
Boiling Point: Bp_{22} 177-178°

>>**Derivative:** Anhydride
Synonym(s): 1,4-Oxathiane-2,6-dione, 9CI

CAS Registry Number: 3261-87-8
Molecular Formula: $C_4H_4O_3S$
Molecular Weight: 132.14
Accurate Mass: 131.988115
Percentage Composition: C 36.36%; H 3.05%; O 36.32%; S 24.27%
Physical Description: Needles ($CHCl_3$)
Melting Point: Mp 102°
Boiling Point: Bp_{10} 158°
Solubility: V. sol. hot $CHCl_3$; spar. sol. hot Et_2O

>>**Derivative:** *S,S*-Dioxide

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **1**, 529B, *(ir)*
Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **1**, 820A, *(nmr)*
Barkenbus, C. *et al.*, *J.A.C.S.*, 1948, **70**, 684, *(synth)*
Mukhina, M.V. *et al.*, *Vysokomol. Soedin.*, 1966, **8**, 1926; 1929; *CA*, **66**, 18881k; 18882m, *(polymers)*
Paul, S., *Acta Cryst.*, 1967, **23**, 490, *(cryst struct)*
Stefan, J. *et al.*, *Gazz. Chim. Ital.*, 1987, **117**, 529, *(Me ester, synth)*
Srinivas, R. *et al.*, *Org. Mass Spectrom.*, 1989, **24**, 128, *(ms)*
Beye, N. *et al.*, *J.O.C.*, 1994, **59**, 2223, *(dinitrile)*
Kates, M.J. *et al.*, *J. Het. Chem.*, 1995, **32**, 971, *(synth)*
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold*, 1992, MCM750