



>>Entry Name: [(Methylthio)methyl]phosphonic acid, 8Cl

MeSCH₂P(O)(OH)₂

Molecular Formula: C₂H₇O₃PS

Molecular Weight: 142.115

Accurate Mass: 141.985352

Percentage Composition: C 16.90%; H 4.96%; O 33.77%; P 21.79%; S 22.56%

Use/Importance: Esters form carbanions which may be alkylated or acylated, and which undergo Wittig-Horner reaction with aldehydes or ketones to give 1-methylthioalkenes, and thence methyl ketones

>>Derivative: Di-Me ester

Synonym(s): Dimethyl [(methylthio)methyl]phosphonate

CAS Registry Number: 25508-32-1

Molecular Formula: C₄H₁₁O₃PS

Molecular Weight: 170.169

Accurate Mass: 170.016652

Percentage Composition: C 28.23%; H 6.52%; O 28.21%; P 18.20%; S 18.84%

Boiling Point: Bp₃₀ 138-140°. Bp_{0.02} 55°

Refractive Index: n_D²⁰ 1.4780

>>Derivative: Di-Et ester

Synonym(s): Diethyl [(methylthio)methyl]phosphonate

CAS Registry Number: 28460-01-7

Molecular Formula: C₆H₁₅O₃PS

Molecular Weight: 198.222

Accurate Mass: 198.047952

Percentage Composition: C 36.36%; H 7.63%; O 24.21%; P 15.63%; S 16.18%

Physical Description: Liq.

Boiling Point: Bp_{0.2} 70-72°

Refractive Index: n_D²⁰ 1.4635

Aldrich: 36666-8

>>Derivative: Diisopropyl ester

Synonym(s): Diisopropyl [(methylthio)methyl]phosphonate

CAS Registry Number: 124008-87-3

Molecular Formula: C₈H₁₉O₃PS

Molecular Weight: 226.276

Accurate Mass: 226.079252

Percentage Composition: C 42.46%; H 8.46%; O 21.21%; P 13.69%; S 14.17%

Physical Description: Liq.

Boiling Point: Bp_{0.05} 56°

>>Derivative: Difluoride

CAS Registry Number: 124008-84-0

Molecular Formula: C₂H₅F₂OPS

Molecular Weight: 146.097

Accurate Mass: 145.976678

Percentage Composition: C 16.44%; H 3.45%; F 26.01%; O 10.95%; P 21.20%; S 21.95%

Physical Description: Liq.

Boiling Point: Bp₁₀ 60°

>>Derivative: Dichloride

CAS Registry Number: 124008-82-8