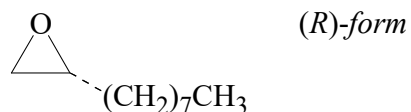




>>Entry Name: Octyloxirane

Synonym(s): 1,2-Epoxydecane, 8Cl. 1-Decene oxide. Vikolox 10



CAS Registry Number: 2404-44-6

Molecular Formula: C₁₀H₂₀O

Molecular Weight: 156.267

Accurate Mass: 156.151415

Percentage Composition: C 76.86%; H 12.90%; O 10.24%

Aldrich: 26033-9

>>Variant: (R)-form

CAS Registry Number: 67210-36-0

Molecular Formula: C₁₀H₂₀O

Molecular Weight: 156.267

Accurate Mass: 156.151415

Percentage Composition: C 76.86%; H 12.90%; O 10.24%

Optical Rotation: $[\alpha]_D^{24} +8.29$ (c, 1.35 in CHCl₃) (>95% ee)

>>Variant: (S)-form

CAS Registry Number: 81623-66-7

Molecular Formula: C₁₀H₂₀O

Molecular Weight: 156.267

Accurate Mass: 156.151415

Percentage Composition: C 76.86%; H 12.90%; O 10.24%

Boiling Point: Bp₅₀ 80-84°. Bp₃₄ 111-112°

Optical Rotation: $[\alpha]_D^{23} -14.7$ (c, 1.44 in Et₂O)

Other Data: No comments given on the boiling point difference

>>Variant: (±)-form

CAS Registry Number: 67210-45-1

Molecular Formula: C₁₀H₂₀O

Molecular Weight: 156.267

Accurate Mass: 156.151415

Percentage Composition: C 76.86%; H 12.90%; O 10.24%

Use/Importance: Lubricant

Physical Description: Liq.

Boiling Point: Bp₉₅ 125-131°. Bp₃₀ 95-98°

References:

- Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **1**, 230A, (*ir*)
Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **1**, 365C, (*nmr*)
Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 302D, (*ir*)
George, D.A. *et al.*, *J. Chem. Eng. Data*, 1975, **20**, 445, (*ms, ir*)
Pirkle, W.H. *et al.*, *J.O.C.*, 1978, **43**, 3803; 1980, **45**, 1379, (*synth, cd*)
Jolley, S.T. *et al.*, *J.O.C.*, 1980, **45**, 3554, (*synth*)
Masaoka, Y. *et al.*, *Agric. Biol. Chem.*, 1982, **46**, 2319, (*synth, ir*)
Bascetta, E. *et al.*, *Chem. Phys. Lipids*, 1985, **36**, 253, (*cmr*)
Robinson, P.L. *et al.*, *J.A.C.S.*, 1985, **107**, 5210, (*synth*)
Oppolzer, W. *et al.*, *Tet. Lett.*, 1985, **26**, 5037, (*synth*)
Nyquist, R.A., *Appl. Spectrosc.*, 1986, **40**, 275, (*ir*)
Uemura, S. *et al.*, *J.C.S. Perkin I*, 1990, 1697, (*synth*)
Ohta, H. *et al.*, *Tet. Lett.*, 1990, **31**, 2895, (*synth*)
Chattopadhyay, S. *et al.*, *Tetrahedron*, 1990, **46**, 3667, (*synth*)
Yamada, T. *et al.*, *Bull. Chem. Soc. Jpn.*, 1991, **64**, 2109, (*synth*)
Savle, P.S. *et al.*, *Tetrahedron: Asymmetry*, 1998, **9**, 1843-1846, (*R-form*)