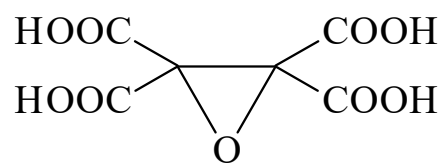




>>Entry Name: Oxiranetetracarboxylic acid, 9CI

Synonym(s): 1,2-Epoxy-1,1,2,2-ethanetetracarboxylic acid, 8CI



CAS Registry Number: 83242-85-7

Molecular Formula: C₆H₄O₉

Molecular Weight: 220.092

Accurate Mass: 219.985535

Percentage Composition: C 32.74%; H 1.83%; O 65.42%

>>Derivative: Tetra-Me ester

CAS Registry Number: 3298-68-8

Molecular Formula: C₁₀H₁₂O₉

Molecular Weight: 276.199

Accurate Mass: 276.048135

Percentage Composition: C 43.49%; H 4.38%; O 52.13%

Physical Description: Cryst.

Melting Point: Mp 73-74°

>>Derivative: Tetra-Et ester

CAS Registry Number: 3298-44-0

Molecular Formula: C₁₄H₂₀O₉

Molecular Weight: 332.307

Accurate Mass: 332.110735

Percentage Composition: C 50.60%; H 6.07%; O 43.33%

Physical Description: Liq.

Boiling Point: Bp_{1.5} 163-168°

>>Derivative: Tetranitrile

Synonym(s): Tetracyanooxirane. Tetracyanoethylene oxide

CAS Registry Number: 3189-43-3

Molecular Formula: C₆N₄O

Molecular Weight: 144.092

Accurate Mass: 144.007211

Percentage Composition: C 50.01%; N 38.88%; O 11.10%

Physical Description: Needles (1,2-dichloroethane)

Melting Point: Mp 177-178° (sealed tube)

Hazard & Toxicity: Slowly evolves HCN on exposure to H₂O

Aldrich: 31119-7

Fluka: 87121

References:

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Sadtler Standard Infrared Spectra, 23822; 38559P, (ir, nitrile)

Reiche, A. *et al.*, *Chem. Ber.*, 1963, **96**, 3044, (synth, nitrile)

Linn, W.J. *et al.*, *J.A.C.S.*, 1963, **85**, 2032; 1965, **87**, 3651; 3657; 3665, (synth, nitrile)

Titkova, R.M. *et al.*, *Zh. Org. Khim.*, 1965, **1**, 1121; *CA*, **63**, 11484a, (synth)

Org. Synth., 1969, **49**, 103, (synth, ir, haz, nitrile)

Matthews, D.A. *et al.*, *J.A.C.S.*, 1971, **93**, 5945, (cryst struct, nitrile)

Ger. Pat., 1977, 2 614 590; *CA*, **88**, 6699y, (synth)