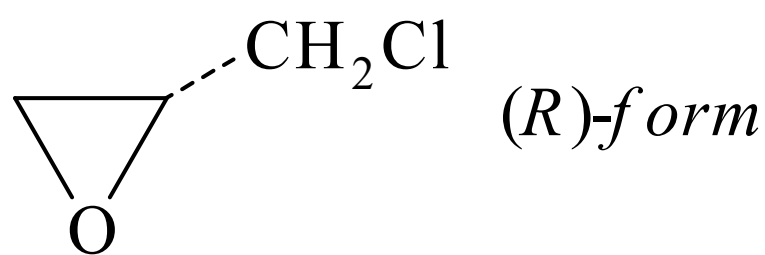




>>Entry Name: (Chloromethyl)oxirane, 9CI, 8CI

ENTRY UNDER REVIEW

Synonym(s): α -Epichlorohydrin. 3-Chloropropylene oxide. 1-Chloro-2,3-epoxypropane. Epichlorohydrin



CAS Registry Number: 106-89-8

Molecular Formula: C_3H_5ClO

Molecular Weight: 92.525

Accurate Mass: 92.002892

Percentage Composition: C 38.94%; H 5.45%; Cl 38.32%; O 17.29%

Hazard & Toxicity: Flammable, fl. p. 41°, autoignition temp. 411°. Toxic by skin contact and inhalation, irritant. Reacts violently with some materials. Possible human carcinogen. Severe eye, skin and respiratory tract irritant. A vesicant and skin sensitiser. Can cause dermatitis. Inhalation may cause respiratory paralysis. Exp. carcinogen and teratogen. Exp. reprod. effects. LD₅₀ (mus, orl) 195 mg/kg; LD₅₀ (mus, skn) 250 mg/kg. OES: long-term 0.5 ppm; short-term 1.5 ppm

Aldrich: 24069-9

Fluka: 45340

Sigma: E4255

Supelco: R30-0560

>>Variant: (R)-form

CAS Registry Number: 51594-55-9

Molecular Formula: C_3H_5ClO

Molecular Weight: 92.525

Accurate Mass: 92.002892

Percentage Composition: C 38.94%; H 5.45%; Cl 38.32%; O 17.29%

Physical Description: Liq.

Boiling Point: Bp 115-116°

Optical Rotation: $[\alpha]_D^{22} -33$ (c, 4.22 in MeOH)

Aldrich: 36157-7

Fluka: 45325

>>Variant: (S)-form

CAS Registry Number: 67843-74-7

Molecular Formula: C_3H_5ClO

Molecular Weight: 92.525

Accurate Mass: 92.002892

Percentage Composition: C 38.94%; H 5.45%; Cl 38.32%; O 17.29%

Physical Description: Liq.

Optical Rotation: $[\alpha]_D^{20} +33$ (c, 1.126 in MeOH)

Aldrich: 36158-5

Fluka: 45327

>>Variant: ($\pm$)-form

CAS Registry Number: 13403-37-7

Molecular Formula: C_3H_5ClO

Molecular Weight: 92.525

Accurate Mass: 92.002892

Percentage Composition: C 38.94%; H 5.45%; Cl 38.32%; O 17.29%

Source/Synthesis: Prod. by chlorohydrination of 3-Chloro-1-propene [DFW09-C](#) followed by dehydrochlorination of the resulting glycerol dichlorohydrin

Use/Importance: Used in manuf. of epoxy resins, glycerol and various other intermeds.

Physical Description: Liq.

Melting Point: Fp -57.2°

Boiling Point: Bp 115-117°

Solubility: Insol. H₂O; misc. most org. solvs.

Density: d_4^{20} 1.181

Refractive Index: n