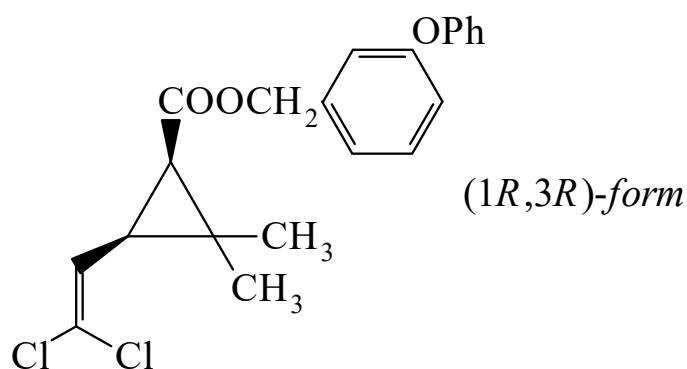




>>Entry Name: **Permethrin**, ANSI, BAN, BSI, INN, ISO, USAN

Synonym(s): (3-Phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate, 9Cl. 3-Phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate. Elimate. Lyclear. Nix. Pyreflor. Stomoxin. Wellcare. FMC 33297. **Ambush**‡. Talcord. Penthrine. Picket. Pounce. Outflank. Stockade. Perigen. Ecsumin. Ectiban. Efmethrin. Exmin. Damminix. Ipitox. Kavil. Coopex



CAS Registry Number: 52645-53-1

Related CAS Registry Numbers(s): 51877-74-8 52341-32-9 52341-33-0 54774-45-7 54774-46-8 54774-47-9 57608-04-5 63364-00-1

Molecular Formula: C₂₁H₂₀Cl₂O₃

Molecular Weight: 391.293

Accurate Mass: 390.078949

Percentage Composition: C 64.46%; H 5.15%; Cl 18.12%; O 12.27%

Biological Use/Importance: Pyrethroid pesticide; used for the treatment of head lice and scabies, also widely used agriculturally. Insecticide

Physical Description: Cryst. or pale yellow viscous liq. (technical prod.)

Melting Point: Mp 35 ° (technical prod.)

Boiling Point: Bp_{0.05} 220° (technical prod.)

Calculated Log P Data: Log P 7.12 (uncertain value) (calc)

Other Data: More stable to light and lower mammalian toxicity than natural pyrethrins. Toxic to bees and fish

Hazard & Toxicity: Irritant to skin and eyes. LD₅₀ (rat, orl) *ca.* 4000 mg/kg

Supelco: 44-2748

>>Variant: (1*R*,3*R*)-form

Synonym(s): (–)-*cis*-form. NRDC 167

CAS Registry Number: 54774-45-7

Molecular Formula: C₂₁H₂₀Cl₂O₃

Molecular Weight: 391.293

Accurate Mass: 390.078949

Percentage Composition: C 64.46%; H 5.15%; Cl 18.12%; O 12.27%

Physical Description: Viscous oil

Melting Point: Mp 67-69°

Optical Rotation: [α]_D²⁵ –7.8 (c, 1 in CHCl₃). [α]_D 0 (c, 1.1 in EtOH)

>>Variant: (1*R*,3*S*)-form

Synonym(s): (+)-*trans*-form. **Biopermethrin** BSI, ISO. NRDC 147

CAS Registry Number: 51877-74-8

Molecular Formula: C₂₁H₂₀Cl₂O₃

Molecular Weight: 391.293

Accurate Mass: 390.078949

Percentage Composition: C 64.46%; H 5.15%; Cl 18.12%; O 12.27%

Biological Use/Importance: Insecticide

Optical Rotation: [α]_D +5.2 (c, 1.3 in EtOH)

Other Data: *n*_D 1.5678