

Safety data for permethrin

[Glossary](#) of terms on this data sheet.

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers.

General

Synonyms: (3-phenoxyphenyl)methyl(+/-)-cis,trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate, 3-Phenoxybenzyl-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate, very wide range of trade names, including ambush, actiban, exmin, indothrin, pertox, anomethrin, matadan, antiborer, outflank, pramex, permethrin, persect, perthrine, kafil, efmethrin and many others.

Molecular formula: $C_{21}H_{20}Cl_2O_3$

Chemical family: Synthetic pyrethroid

CAS No: 52645-53-1

EINECS No:

Physical data

Appearance: colourless crystals (but the technical product is normally supplied as a pale brown liquid)

Melting point: 34 C

Boiling point: 200 C at ca. 1 mm Hg

Vapour density:

Vapour pressure:

Density ($g\ cm^{-3}$): 1.19

Flash point:

Explosion limits:

Autoignition temperature:

Water solubility: insoluble

Stability

Stable. Incompatible with strong oxidising agents.

Toxicology

Skin and eye irritant. May be harmful if swallowed.

Toxicity data

(The meaning of any abbreviations which appear in this section is given [here.](#))

Note: Toxicity depends on cis-trans ratio of the product.

ORL-RAT LD50 430 - 4000 mg kg⁻¹

ORL-MUS LD50 540 - 2700 mg kg⁻¹

SKN-RAT LD50 > 4000 mg kg⁻¹

SKN-RBT LD50 > 2000 mg kg⁻¹

Risk phrases

(The meaning of any risk phrases which appear in this section is given [here.](#))

R36 R37 R38.

Transport information

Non-hazardous for air, sea and road transport.

Environmental information

Estimated half-life in the vapour phase (present as particulate matter) 10 h.

Estimated half-life in soil 30 d.

Personal protection

Safety glasses. If used as a garden spray, avoid exposure to mist and liquid, wear gloves.

Safety phrases

(The meaning of any safety phrases which appear in this section is given [here.](#))

[Return to [Physical & Theoretical Chemistry Lab. Safety home page.](#)]

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