



TECHNICAL DATA BULLETIN

PRODUCT TECHNICAL INFORMATION AND APPLICATIONS

TRANSACT 18EC

(Abamectin 18 g/L)

1 INTRODUCTION

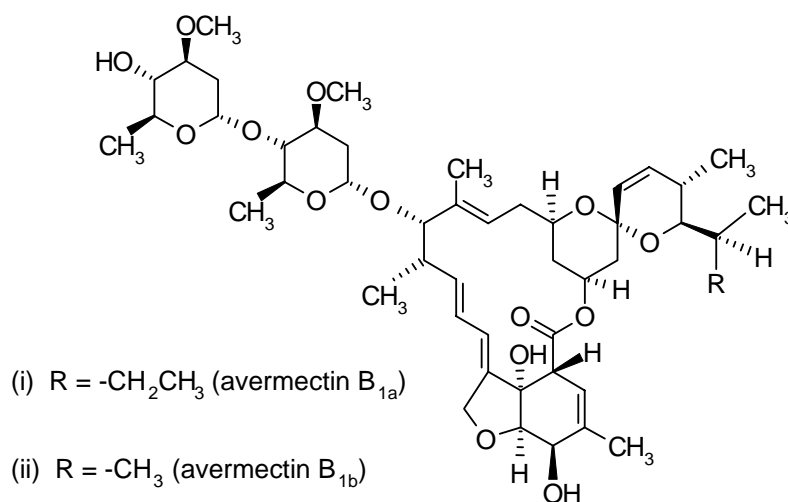
Transact 18EC is an emulsifiable concentrate formulation containing 18 g / L of the active ingredient **Abamectin**. It has translaminar activity with stomach and contact action.

Transact 18EC is used as a broad spectrum acaricide / insecticide for the control of mites, Leafminers, thrips larvae and other pests in a large number of agricultural crops including vegetables, fruit trees and ornamentals.

2 ACTIVE INGREDIENT:

Common name	Abamectin
Chemical Group	Avermectin
CAS Registry No.	71751-41-2
Molecular Formula	C ₄₈ H ₇₂ O ₁₄ for Avermectin B _{1a} C ₄₇ H ₇₀ O ₁₄ for Avermectin B _{1b}

Structural Formula





Chemical Name (IUPAC)	(10E,14E,16E,22Z)-(1R,4S,5'S,6S,6'R,8R,12S,13S,20R,21R,24S)-6'-[(S)-sec-butyl]-21,24-dihydroxy-5',11,13,22-tetramethyl-2-oxo-3,7,19-trioxatetracyclo[15.6.1.1 ^{4,8} .0 ^{20,24}]pentacosa-10,14,16,22-tetraene-6-spiro-2'-(5',6'-dihydro-2'H-pyran)-12-yl 2,6-dideoxy-4-O-(2,6-dideoxy-3-O-methyl- -L-arabino-hexopyranosyl)-3-O-methyl- -L-arabino-hexopyranoside (i) mixture with (10E,14E,16E,22Z)-(1R,4S,5'S,6S,6'R,8R,12S,13S,20R,21R,24S)-21,24-dihydroxy-6'-isopropyl-5',11,13,22-tetramethyl-2-oxo-3,7,19-trioxatetracyclo[15.6.1.1 ^{4,8} .0 ^{20,24}]pentacosa-10,14,16,22-tetraene-6-spiro-2'-(5',6'-dihydro-2'H-pyran)-12-yl 2,6-dideoxy-4-O-(2,6-dideoxy-3-O-methyl- -L-arabino-hexopyranosyl)-3-O-methyl- -L-arabino-hexopyranoside (ii) (4:1)
Molecular weight	873.1 (avermectin B1a); 860.1 (avermectin B1b)
Vapour Pressure	<3.7 10 ⁻³ mPa (25 °C)
K _{ow} log P	4.4 ± 0.3 (pH 7.2, @room temperature)
Acute oral LD ₅₀ , Male rat (a.i.)	10 mg/kg

Abamectin is a natural product containing macrocyclic lactone glycoside. It is isolated from the fermentation of *Streptomyces avermitilis*.

3 PHYSIOCHEMICAL PROPERTIES:

Assay " Abamectin "	18 2.7 g/L
Appearance	Clear Yellow liquid free of visible impurities
Odour	Characteristic
Density (Kg/L)	0.970 ± 0.006
Flash Point	>60 C
Acidity as H ₂ SO ₄	< 5.0 g/Kg
Water contents	<10.0 g/Kg

4 MODE OF ACTION:

Transact 18EC is an Insecticide and acaricide with contact and stomach action. It is primarily active as a foliar ingested toxicant. It has a limited systemic activity on the plant and exhibits translaminar movement on the leaves.

5 USES:

Transact 18EC is used for the control of mites (*Tetranychid*, *Eriophyid* and *Tarsonemid*), Agromyzid leafminers (*Liriomyza spp.*), pear psylla (*Psylla pyricola*), tomato pinworm (*Keiferia lycopersicella*), diamondblack moth (*Plutelia xylostella*) and fire ant (*Solenopsis invicta*). It is used in a number of crops and ornamental plants including tomatoes, lettuce, peppers, cucurbits, potatoes, strawberries, water melon, sweet melon, apples, pears, citrus, almonds, cotton, protected flowers and ornamentals.



Transact 18EC has no detrimental effect to beneficial *hymenopterous leafminer* parasites. Thus, it is recommended as a key component for used in integrated pest management programs.

6 APPLICATIONS:

Transact 18EC is applied as a foliar spray after being diluted with water. It is applied when insects or mites appear and repeated if necessary on 7 - 10 days schedule.

The following table can be considered as a general guide for the application of **Transact 18EC**.

Recommendations for Use

Crop	Pest	Rate of Use	PHI
Vegetables: Lettuce, Eggplant, Tomato, Pepper, Cucumber and Melon	Leafminers (<i>Liriomyza</i> spp)	50 ml / 100 L of water	10 Days
Cucumber	Spider Mite <i>Tetranychus</i>	25 ml/100 L of water	10 Days
	Thrips	50 ml/100 L of water	
Strawberry	Spider Mite	0,6 – 1,2 L/ha in 500 L of water/ha	10 days
Fruit Trees Citrus	Citrus rust mite, <i>Phyllocoptruta olavora</i>	30 ml/100 L of water	10 Days
Pears	Spider & Yellow Mites	0.75 – 1.5 L/ha in 1000-2000 L of water/ha	28 Days
Ornamentals	Leafminers	50 ml/100 L of water	
	Spider Mite	25 ml/100 L of water	

For effective control the following notes should be considered:

Spray treatment has to be carried out at the first sign of infestation.

Spraying has to be repeated when required.

Total cover of plan surface is essential. Run-off should be avoided.

3-5 days may be required for maximum effect.

Maximum concentration of spray solution should not exceed 50 ml/100 L

Transact 18EC can be used in combination with a minimum of 0.25% paraffin oil to control nymphal population of mites.



7 PHYTOTOXICITY:

Transact 18EC non-phytotoxic when used as recommended. However, the product should not be used on ferns and some spotting or staining may occur on carnation, kalanchoe and begonia foliage.

8 COMPATIBILITY:

Transact 18EC can be tank mixed with other pesticide. However, for new mixtures a small-scale trial mix should be carried out and tested before large- scale application.

9 PRE HARVEST INTERVAL:

The Pre harvest interval ranges between 7-10 days depending on the treated crop.

10 HANDLING, STORAGE AND TRANSPORTATION:

Transact 18EC should be transported and stored in clearly labeled. Original containers, under lock and key secured from access by unauthorized persons and children's. No food or drink should be stored in the same compartment. Full protective clothing, including impermeable boots, clean overalls, gloves and respirators should be provided for all personnel handling this product.