



龍燈農業化工股份有限公司
ROTAM AGROCHEMICAL CO., LTD.

7/F. Cheung Tat Centre,
No.18, Cheung Lee Street,
ChaiWan, Hong Kong.

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MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Rotam Agrochemical Co. Ltd

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Tel.: 2896 5608, 2896 0662

Fax.: 2558 6577, 2896 5730

Emergency Telephone Numbers: (852) 28965608 Hong Kong

Product Name: Lucid[®] 19g/kg Emulsifiable Concentrate

Product Code: RTFI-001

Chemical Name of Active Ingredient (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}]pentacos-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- α -L-arabino-hexopyranosyl)-3-O-methyl- α -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}]pentacos-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- α -L-arabino-hexopyranosyl)-3-O-methyl- α -L-arabino-hexopyranoside (ii)

Chemical Formula of Active Ingredient:

Avermectin B1a: C₄₈H₇₂O₁₄ (i)

Avermectin B1b: C₄₇H₇₀O₁₄ (ii)

CAS/EPA/EU Registry Number of Active Ingredient:

65195-55-3 & 65195-56-4 (CAS); 495 (CIPAC)

Section 2. Composition/Information on Ingredients

Component	CAS Number	Content (g/kg)
Abamectin	65195-55-3 & 65195-56-4	19
Solvents	Not Available	Balance to 1 liter

Section 3. Hazards Identification

CAUTION! Harmful if swallowed especially when significant amounts are ingested. Inhalation of high concentrations of vapor can cause headache, nausea. May cause irritant if contact with skin or eyes.



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Section 4. First Aid Measures

Eye Contact: Flush eyes with large amount of water until irritation subsides. If irritation persists, get medical attention.

Skin Contact: Flush with large amount of water; use soap or detergent if available. Remove grossly contaminated clothing, including shoes, and launder before reuse.

Inhalation: Wearing proper respiratory protection before rescues. Immediately remove the affected victim from exposure to an area of fresh air. If not breathing, give artificial respiration; if breathe difficult, give oxygen. Get medical attention.

Ingestion: If swallowed, rinse mouth with water. Keep patient at rest. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.

Section 5. Fire Fighting Measures

Fire and Explosion Hazards: Combustible liquid. Flash point >61°C (Closed cup method). When heated above the flash point, this product releases vapors which, when mixed with air, can burn or be explosive.

Firefighting Media: Foam; dry chemical or CO₂ to extinguish fire

Firefighting Precaution: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent material run-off. Decontaminate emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapors and fumes from burning materials. Control run-off water.

Section 6. Accidental Release Measures

In case materials are released, contact emergency response personnel. Keep unnecessary persons away. If emergency response personnel are unavailable, absorb small spills on spill pillows or other suitable absorbing material and place in a sealed container for disposal. Dike large spills and transfer to an appropriate container for disposal. Avoid contact of spilled materials and runoff with soil and surface waterways. Use suitable protective equipment (Section 8). Follow all fire prevention procedures (Section 5).

Section 7. Handling and Storage

Handling Precautions: Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin or clothing. Do not breathe spray mist. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Follow manufacturer's instructions for



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cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Storage Precautions: Do not use, pour, or store near heat or open flame. Store in the original container and keep closed. Store in cool, dry and well-ventilated place.

Section 8. Exposure Controls/Personal Protection

Engineering Controls: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system.

Eye/Face: To protect against accidental eye contact, goggles/face-shield should be worn.

Skin Protection: Rubber gloves should be worn. Wash thoroughly with soap and water after handling.

Respiratory Protection: Ensure good ventilation. For maximum protection, wear a supplied air, full-facepiece respirator, airtight hood, or full-facepiece self-contained breathing apparatus.

Note to applicators and handlers of agricultural products: Applicators and handlers must wear the following Personal Protective Equipment (PPE):

- ▶ Coveralls over long-sleeved shirt and long pants
- ▶ Chemical-resistant gloves, such as barrier laminate or viton
- ▶ Chemical-resistant footwear plus socks
- ▶ Protective eyewear
- ▶ Chemical-resistant headgear for overhead exposure
- ▶ Chemical-resistant apron when mixing and loading

Section 9. Physical and Chemical Properties

Appearance	Yellowish liquid
Odor	Characteristic odor
Specific Gravity	0.966
Water Solubility	Disperse in water

Section 10. Stability and Reactivity

Stability: Stable under normal handling and storage conditions.

Incompatibilities: Avoid mixed with highly reactive chemicals such as strong acid, strong base or strong oxidizing agent.

Hazard Decomposition: Thermal decomposition may emit toxic fumes of carbon monoxide and carbon dioxide.

Hazard Polymerization: Will not occur.



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Section 11. Toxicological Information

Acute Oral Toxicity: LD₅₀ for albino rats 303 mg/kg
Acute Dermal Toxicity: LD₅₀ for rabbits >2020 mg/kg
Acute Inhalation Toxicity: LC₅₀ (4 h) for rats 2.29 mg/l
Skin Irritation: Moderately irritating
Eye Irritation: Moderately irritating

Section 12. Ecological Information

This product is toxic to aqueous organism. Referenced technical ecological toxicology data list as below:

Birds Acute oral LD₅₀ for mallard ducks 84.6, bobwhite quail >2000 mg/kg
Fish LC₅₀ (96 h) for rainbow trout 3.2, bluegill sunfish 9.6 µg/l.
Bees Toxic to bees.

Environmental Fate:

Animals Rapidly eliminated (80-100% in 96 h), mainly via faeces; urinary excretion was 0.5-1.4%.

Plants Degradation/metabolism in each of three different plants is similar and occurs predominantly by photolysis on the plant surfaces. The definition of the residues is thus expressed as the combined residues of avermectin B1 and its 8,9-Z-avermectin B1 photoisomer.

Soil/Environment

Binds tightly to soil, with rapid degradation by soil microorganisms. No bioaccumulation.

Section 13. Disposal Considerations

Disposal of product would be treated, stored, transported, and disposed of according to the local waste regulation authority. Do not flush to surface water or sanitary sewer system.

Section 14. Transport Information

IMO Classification

Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S.
Lucid[®] 19g/kg Emulsifiable Concentrate

Class: 6.1
UN No.: 2902
Packaging Group III
Marine Pollutant



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Section 15. Regulator Information

European/International Regulation:

Hazard Symbols:

Xn Harmful

Risk Phrases:

R 20 Harmful by inhalation

R 22 Harmful if swallowed

Safety Phrases:

S 1/2 Keep locked-up and out of reach of children

S 3 Keep in a cool place

S 4 Keep away from living quarters

S 7 Keep container tightly closed

S 9 Keep container in well-ventilated place

S 13 Keep away from food, drink and animal feeding stuffs

S 20 When using do not eat or drink.

S 24/25 Avoid contact with skin and eyes

S 36 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S 46 If swallowed, seek medical advice immediately and show this container or label.

Section 16. Other Information

Disclaimer: The information provided by Rotam Agrochemical Co., Ltd contained herein is given in good faith and to the best of our knowledge. However, no warranty is expressed or implied.

Prepared by: Technical Development Department

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