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The Science of Entomology

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SAFETY DATA SHEET
X-Mate™ F.C.M./ X-Mate™ F.C.M.+

1. IDENTIFICATION

Product code: XMFCM/ XMFCM+
Product name: X-Mate™ F.C.M./ X-Mate™ F.C.M.+
Chemical contents: False codling moth pheromone: (*E*)-8-dodecenyl acetate (CAS 38363-29-0), (*Z*)-8-dodecenyl acetate (CAS 28079-04-1)

Product description, recommended uses and restrictions:
This product consists of false codling moth pheromone impregnated in a cellulose coaster. This product is intended for use in agricultural crops as mating disruption for false codling moth (*Thaumatotibia leucotreta*).

Supplier: Insect Science (Pty) Ltd.
9 Industria Street, New Industrial Area, Tzaneen, 0850, South Africa
Telephone: 015 307 1391 / 015 065 0199
Emergency number: 015 307 1391 / 015 065 0199 (office hours)
In case of poisoning: Griffon Poison Information Centre 082 446 8946
Tygerberg Hospital 021 931 6129
Poison Emergency Enquiries 021 689 5227

2. HAZARD IDENTIFICATION

Classification of substance or mixture according to GHS; Regulation (EC) No 1272/2008

Hazard Class	Hazard Category	Hazard Statement
Health		
Skin Irritation	Category 2	H315

Label elements
Pictograms:

Signal word: Warning
Hazard statement(s):
H315: Causes skin irritation.
Precautionary statements:
P280: Wear protective gloves.
P264: Wash hands thoroughly after handling.

P302+P352: IF ON SKIN: Wash with plenty of water.
P332+P317: If skin irritation occurs: Get medical help.
P362+P364: Take off contaminated clothing and wash it before reuse.
Supplemental hazard statement(s):
None
Other hazards: Not known

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / mixture: Mixture loaded into a cellulose coaster

Substance name: (*E*)-8-dodecenyl acetate
CAS registry number: 38363-29-0
Formula: $C_{14}H_{26}O_2$
Synonyms: E8-12Ac, *trans*-8-dodecenyl acetate

Substance name: (*Z*)-8-dodecenyl acetate
CAS registry number: 28079-04-1
Formula: $C_{14}H_{26}O_2$
Synonyms: *Cis*-8-dodecenyl acetate, *cis*-8-dodecen-1-ol acetate

Hazardous ingredients according to GHS

Component	CAS registry number	Concentration	Classification EC 1272/2008
(*E*)-8-dodecenyl acetate	38363-29-0	< 50%	Skin Irrit. 2 (H315)

4. FIRST-AID MEASURES

General advice

Ingestion: If swallowed, wash mouth with water if person is conscious. Never give anything by mouth to an unconscious person. The mixture is not classified as toxic by oral consumption. The device may represent a choking hazard. Obtain medical attention if necessary.

Skin contact: The mixture loaded in the coaster may cause skin irritation. In case of contact, remove contaminated clothing if applicable and wash area of exposure with non-abrasive soap and copious amounts of water for several minutes. Consult a physician if irritation persists.

Inhalation: The mixture loaded in the coaster is not expected to be acutely toxic by inhalation. If inhaled, remove the source of contamination or move victim to fresh air.

Eye contact: Immediately flush eyes with clean water for several minutes, holding the eyelids open. If present, remove contact lenses after 5 minutes. Continue rinsing. Consult a physician if irritation persists.

Most important symptoms and effects, both acute and delayed: The mixture loaded into the coaster may cause skin irritation.
Indication of any immediate medical attention and special treatment needed: There is no specific antidote available. Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

This material is not flammable.
Extinguishing media
Suitable: Where possible, extinguish fire with dry chemical powder, foam or carbon dioxide.
Unsuitable: Not known.
Specific hazards arising from combustion: Carbon monoxide and carbon dioxide.
Special precautions for fire-fighters: Remove spectators from the area. Stay upwind of fire to avoid inhalation of hazardous vapours and fumes. Wear self-contained breathing apparatus and protective clothing where necessary. Always fight fires from the maximum distance, especially in the case of hazardous material. Contain fire control agents for later disposal.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures.
Wear impermeable gloves when handling the product to avoid contact with skin.
Environmental precautions: This product is not expected to be harmful to the environment when used according to recommendations.
Methods and materials for containment and cleaning up: Spillage is unlikely. Clean up devices and dispose of according to local regulations. Burning or dumping of this material is prohibited.

7. HANDLING AND STORAGE

Precautions for safe handling: KEEP OUT OF REACH OF CHILDREN AND ANIMALS. Before handling, ensure that all hazards are understood and the correct personal protective equipment is used (refer to section 8 of this SDS). This product is considered a skin irritant. Avoid contact with skin. Wash hands thoroughly after use and before eating, drinking, smoking or using the toilet. Wash contaminated clothing after use.
Conditions for safe storage, including any incompatibilities: Store containers locked away and out of reach of uninformed persons or animals. Store the product in its original, labelled, closed container in a refrigerator / freezer until use. Never transfer this product to another container for storage. Always comply with local regulations.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Permissible concentrations:
No occupational exposure limits have been set for any of the ingredients used in the manufacturing of this product.
Engineering controls: Adequate ventilation is essential. The appropriate measures that need to be implemented at a worksite will depend on the way in which the product is used and on the extent of worker exposure. Provide local exhaust ventilation systems to maintain airborne concentrations below permissible exposure limits.
Personal protective equipment:
Eye / face protection: Avoid touching eyes when handling the product.
Skin protection: Avoid contact with skin. Handle with impermeable gloves.
Respiratory protection: Avoid breathing mist or vapours.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid loaded into a cellulose coaster
Colour: Murky, light yellow
Odour: Characteristic pheromone odour
Melting point / freezing point:
Boiling point or initial boiling point and boiling point range: 285 °C @ 760 mmHg [(*Z*)-8-dodecenyl acetate]
Flammability: Data not available
Lower and upper explosion limit / flammability limit: Data not available.
Flash point: 96.5 ± 20.4 °C [(*E*)-8-dodecenyl acetate]; 110 °C [(*Z*)-8-dodecenyl acetate]
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available
pH: Data not available
Kinematic viscosity: Data not available
Solubility: Insoluble in water [(*Z*)-8-dodecenyl acetate]
Partition coefficient n-octanol / water (log value): Data not available.
Vapour pressure: 0.0005466 kPa at 25 °C [(*Z*)-8-dodecenyl acetate]
Density and/or relative density: 0.881 ± 0.06 g/cm^3 (20°C 760 Torr) [(*E*)-8-dodecenyl acetate]
Relative vapour density: 7.8 relative to air [(*Z*)-8-dodecenyl acetate]
Particle characteristics: Data not available

10. STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical stability:	Rapid degradation, evaporation and volatilization can be expected for all straight chain Lepidoptera pheromone (SCLP) actives.

Possibility of hazardous reactions: No data available.
Conditions to avoid: Open flames.
Incompatible materials: No data available.
Hazardous decomposition products: No data available.

11. TOXICOLOGICAL INFORMATION

Acute toxicity (calculated according to GHS)

Oral > 5000 mg/kg (rat)
Dermal > 5000 mg/kg (rabbit)
Inhalation > 20 mg/L (rat)

Skin corrosion / irritation: Causes skin irritation.
Eye damage / irritation: Not considered an eye irritant.
Respiratory or skin sensitization: Not considered a respiratory or skin sensitizer.
Germ cell mutagenicity: Not considered a mutagen.
Carcinogenicity: Not considered a carcinogen.
Reproductive toxicity: Not considered a reproductive toxin.
Specific target organ toxicity single exposure: Not considered a target organ toxicant after single exposure.
Specific target organ toxicity repeated exposure: Not considered a target organ toxicant after multiple exposure.
Aspiration hazard: Not considered an aspiration hazard.

12. ECOLOGICAL INFORMATION

This impregnated mixture is not classified as environmentally hazardous. Further, application through a dispenser is considered to have minimal ecological impact.
The information below is for (*Z*)-8-dodecenyl acetate. Information not available for the other component.

Ecotoxicity (neat pheromone material)

Fish		
LC_{50} (96h)	Rainbow trout	> 0.99 mg/L*
Birds		
Acute oral LD_{50}	Bobwhite quail	> 2050 mg/kg*
Daphnia		
EC_{50} (48h)		> 100 mg/L*
Algae		
EC_{50}		1.2 mg/L (72h)**
Bees		
LD_{50}		Not available

Worms

LC_{50} (14d) Not available

*This is for the entire commercial blend as sold (i.e., including (*Z*)-8-dodecen-1-ol).

**There are no data available and so, in the registration document, this figure was extrapolated from a chemical in the same class.

Persistence and degradability: Rapid degradation, evaporation and volatilization can be expected for all straight chain Lepidoptera pheromone (SCLP) actives. The pheromone diffuses out of the dispenser and is dispersed throughout the orchard.

Bio-accumulative potential: Rapid degradation, evaporation and volatilization can be expected for all straight chain Lepidoptera pheromone (SCLP) actives.

Mobility in soil: No data available. The product is not expected to come into direct contact with the soil when used according to recommendations. (*E*)-8-dodecenyl acetate is rapidly degraded to CO_2 in soil.

Plants: No data available. The product is not expected to come into direct contact with plant material when used according to recommendations. (*E*)-8-dodecenyl acetate is rapidly oxidized on the surface of leaves.

Other adverse effects: Not known.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Open dumping or burning of this device is prohibited. According to the regulations regarding extended producer responsibility (National Environmental Management: Waste Act, 2008; Act No. 59 of 2008), the used device needs to be incinerated or recycled by an approved recycler. Unused product that has expired needs to be incinerated.

14. TRANSPORT INFORMATION

UN number:	Not regulated.
UN proper shipping name:	Not regulated.
Transport hazard class:	Not regulated.
Packaging group, if applicable:	Not regulated.
Environmental hazards:	Not considered a marine pollutant.
Special precautions for user:	None

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation used:

Regulations for hazardous chemical agents, 2021. Occupational Health and Safety Act, 1993.
OSHA 1993 Regulations for hazardous chemical substances.
EU regulation: Regulation EC1272/2008 (EU-GHS/CLP).
United Nations Globally Harmonized System of Classification, ninth revised edition, 2021.

16. OTHER INFORMATION

Packaging:	Packaged as a ready-to-use mating disruption devices.
Compiled:	September 2022
Reviewed:	September 2022
Revision number:	1
Next revision date:	September 2027

For more information, please contact the registration holder.

END OF SDS.