



Mainspring®

syngenta®

GROUP 28 INSECTICIDE



Product registration number: MAPP 19198

A water dispersible granule containing 400 g/kg cyantraniliprole.

For the control of Western flower thrips (*Frankliniella occidentalis*), Golden twin-spot moth (*Chrysodeixis chalcites*) and Beet army worm (*Spodoptera exigua*) on protected ornamental plant production (grown in organic media) (permanent protection with full enclosure), ornamental plant production (grown in synthetic rooting media) (permanent protection with full enclosure).

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

In case of toxic or transport emergency ring
(01484) 538444 any time

300 g

Syngenta UK Limited
CPC 4, Capital Park, Fulbourn,
Cambridge CB21 5XE
Tel: Cambridge (01223) 883400

MAINSRING®

A water dispersible granule containing 400 g/kg cyantraniliprole

Warning

Very toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Wear protective gloves and protective clothing.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment comply with the instructions for use.

MAPP 19198



IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL INSECTICIDE

Crops/situations:	Ornamental plant production (grown in organic media) (permanent protection with full enclosure), ornamental plant production (grown in synthetic rooting media) (permanent protection with full enclosure)
Maximum individual dose: (kg product / ha)	0.25
Maximum total dose:	-
Maximum number of treatments: (per annum)	4
Latest time of application:	-

Other specific restrictions:

The minimum interval between applications is 7 days. 60 days must elapse before any other applications.

Managers must carry out a thermal comfort checklist (see - <http://www.hse.gov.uk/temperature/assets/docs/thermal-comfort-checklist.pdf>) prior to worker re-entry tasks.

If needed, an additional heat stress check list and associated risk assessment must be undertaken (see - <http://www.hse.gov.uk/temperature/assets/docs/heat-stress-checklist.pdf>) and the records retained. Temperature and humidity inside tunnels should be monitored during re-entry tasks. If conditions become such that there is a risk of heat related illness, or workers complain of ill effects, then work must cease until the risk is reduced. It is not acceptable for workers to remove clothing and continue working. Managers must carry out a thermal comfort checklist (see - <https://www.hse.gov.uk/temperature/assets/docs/thermal-comfort-checklist.pdf>) prior to worker re-entry tasks. If needed, an additional heat stress check list and associated risk assessment must be undertaken (see - <https://www.hse.gov.uk/temperature/assets/docs/heat-stress-checklist.pdf>) and the records retained. Temperature and humidity inside tunnels/greenhouses should be monitored during re-entry tasks. If conditions become such that there is a risk of heat related illness, or workers complain of ill effects, then work must cease until the risk is reduced. It is not acceptable for workers to remove clothing and continue working. Only to be used on crops grown in organic media (such as soil or compost) or artificial media (such as rockwool or perlite), either in containers or on impervious surfaces. Not to be used on crops grown in soil.

The use of this product in recirculating water systems in a glasshouse may result in dilute pesticide waste that requires disposal. All dilute pesticide waste must be disposed of safely and legally to protect humans, wildlife and the environment, especially ground-water and surface water. Pesticide disposal advice is detailed in the 'Code of Practice for Using Plant Protection Products (Section 5: Disposing of Pesticide Waste). Dangerous to bees. Do not use where bees are actively foraging. This product should only be applied to crops grown under permanent protection with full enclosure (grown in organic media and synthetic rooting media).

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS

Product names marked ® or ™, the ALLIANCE FRAME the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company

This product label is compliant with the CPA Voluntary Initiative (VI) guidance



SAFETY PRECAUTIONS

(a) Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.

WORKERS MUST WEAR SUITABLE PROTECTIVE CLOTHING (in which arms, body and legs are fully covered) AND SUITABLE GLOVES* when re-entering treated areas, handling treated crops or contaminated surfaces within 11 weeks of treatment.

*Meeting at least glove safety standard EN374-2:2014, Level 2 and CE category III. Such gloves can be identified by a CE Mark with four digits below, and the EN374 pictogram for micro-organisms.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

WASH SPLASHES from skin or eyes immediately.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before meals and after work.

(b) Environmental protection

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

Dangerous to bees. Do not use where bees are actively foraging.

The use of this product in recirculating water systems in a greenhouse may result in dilute pesticide waste that requires disposal. All dilute pesticide waste must be disposed of safely and legally to protect humans, wildlife and the environment, especially groundwater and surface water. Pesticide disposal advice is detailed in the 'Code of Practice for Using Plant Protection Products (Section 5: Disposing of Pesticide Waste).

(c) Storage and disposal

KEEP IN ORIGINAL CONTAINER tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

This leaflet is part of the approved Product Label.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

Crop tolerance

MAINSRING® has been successfully used at the recommended doses on a range of ornamental species and cultivars without crop damage. It is recommended that small scale tests should be performed before full application on the concerned crop is carried out.

Safety to pollinating bumble bees and use in IPM programmes

Dangerous for bees and bumble bees. The use on flowering plants in the greenhouse is permitted when no foraging bees or bumble bees are present, and when treated plants are not planted outdoor within 7 days after the application. Avoid that bees and other pollinators can enter the greenhouse, for example by closing all openings with insect netting. When bumble bee hives are present these should be closed, covered or removed before making an application. Hives should not be opened or repositioned within 24 hours after the application.

Watch out: this product can be dangerous for beneficials. Consult experts (your supplier of beneficials, the manufacturer of this product, your advisor) about the use of this product in combination with beneficials.

GENERAL INFORMATION

It is recommended that treated ornamentals should not be re-entered before spray deposits on leaf surfaces have completely dried.

PESTS CONTROLLED

For the control of Western flower thrips (*Frankliniella occidentalis*), Golden twin-spot moth (*Chrysodeixis chalcites*) and Beet army worm (*Spodoptera exigua*) on protected ornamental plant production.

The maximum concentration must not exceed 0.01% (=10 g Mainspring per 100l)

CROP SPECIFIC INFORMATION

The product must be applied at a concentration of 0.01% (10g/100l water) for any of the uses.

TIMING

Western Flower Thrips

Apply as soon as the first nymphs are seen in the crop. Two applications at 7 days apart is required to achieve control. Where a persistent problem occurs, MAINSPRING treatment should be rotated with other insecticides suitable for controlling this pest.

For control of *F. occidentalis* always use in tank mixture with 125 ml sugar solution/100l.

Golden twin-spot moth and Beet army worm

Apply as soon as caterpillars are seen, preferably before leaf damage becomes apparent. If required a repeat application may be made 7 days later. It is advisable not to make more than two sequential applications without changing to a product with a different mode of action.

RATE OF USE

Cut flowers (Permanent protection with full enclosure)

Multi-crop cycles in a year

Where multiple crop cycles are grown within the same year, apply MAINSPRING at a concentration of 0.01 % (10 g/100L) with a maximum individual rate of 0.25 kg product/ha. No more than 2 applications should be made per crop cycle, with a maximum of 4 applications per year in any multiple-cropped area. Allow a minimum interval of 7 days between applications. A total maximum dose of 1 kg MAINSPRING/ha per year must not be exceeded.

Continuous Cultivation (where the crop cycle extends to more than a year)

Apply at a concentration of 0.01 % (10 g/100l) with a maximum individual rate of 0.25 kg product/ha. Two applications may be made with a minimum interval of 7 days. This may be repeated after an interval of 60 days. A maximum of four applications per year are permitted. If additional insecticides are required between applications of MAINSPRING to maintain protection, they must be of a different mode of action.

A total maximum dose of 1 kg MAINSPRING/ha/year on the same crop must not be exceeded.

Pot plants (Permanent protection with full enclosure. Non-soil bound, soil fully covered)

Apply at a concentration of 0.01 % (10 g/100l) with a maximum rate of 0.12 kg product/ha. Two applications may be made with a minimum interval of 7 days. This may be repeated after an interval of 60 days. A maximum of four applications per year are permitted. If additional insecticides are required between applications of MAINSPRING to maintain protection, they must be of a different mode of action.

A total maximum dose of 0.48 kg MAINSPRING/ha/year on the same crop must not be exceeded.

Perennials (Pot plants. Permanent protection with full enclosure. Non-soil bound, soil fully covered)

Apply at a concentration of 0.01 % (10 g/100l) with a maximum rate of 0.1 kg product/ha. Two applications may be made with a minimum interval of 7 days. This may be repeated after an interval of 60 days. A maximum of four applications per year are permitted. If additional insecticides are required between applications of MAINSPRING to maintain protection, they must be of a different mode of action.

A total maximum dose of 0.4 kg MAINSPRING/ha/year on the same crop must not be exceeded.

Tree nursery crops (Pot plants. Permanent protection with full enclosure. Non-soil bound, soil fully covered)

Apply at a concentration of 0.01 % (10 g/100l) with a maximum rate of 0.12 kg product/ha. Two applications may be made with a minimum interval of 7 days. This may be repeated after an interval of 60 days. A maximum of four applications per year are permitted. If additional insecticides are required between applications of MAINSPRING to maintain protection, they must be of a different mode of action. A total maximum dose of 0.48 kg MAINSPRING/ha/year on the same crop must not be exceeded.

RESISTANCE MANAGEMENT

Use MAINSPRING as part of an Integrated Crop Management (ICM) strategy incorporating other methods of control, including where appropriate other insecticides with a different mode of action.

This product contains the active ingredient cyantraniliprole. Cyantraniliprole belongs to the group of the diamides. The IRAC code is 28. For this product there is a chance on development of resistance.

Best practices for resistance management of Group 28 insecticides include;

- Avoid using the same mode of action (same IRAC group number) on consecutive generations of insect pests.
- Make no more than 2 applications of Group 28 products per generation to the same insect species on a crop. Application to the next generation of target pest(s) must be with an effective product with a different mode of action (non-Group 28 insecticide).
- Make no more than two successive applications of any diamide within a 30 day period to the same insect species on a crop. The following application to the target pest(s) must be with an effective product with a different mode of action (non-Group 28 insecticide).
- Avoid using less than the labelled rates of MAINSPRING.
- Target the most susceptible insect life stages, whenever possible.
- Monitor insect populations for product effectiveness. If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control.
- If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your supplier or agricultural advisor for the best alternate method of control for your area.

MIXING AND SPRAYING

Mixing

Make sure the sprayer is set to give an even application at the correct volume. Fill the spray tank with half the required volume of clean water and start agitation. Add the required amount of MAINSPRING to the spray tank. Agitate the mixture thoroughly before use and continue agitation during spraying. Thoroughly wash all spray equipment with water immediately after use.

Wash out containers thoroughly, preferably using an integrated pressure rinsing device, or manually rinse three times. Add washings to the sprayer at the time of filling. Complete filling to the required volume and continue to agitate throughout the spraying operation.

Spray Volume

Apply the recommended dose of MAINSPRING in the the following water volumes.

<u>Protected uses</u>	(litres water/ha)
Cut flowers	500 – 2500
Perennials	200 – 1000
Pot Plants	200 – 1200
Tree nursery crops	200 – 1200

Thorough coverage of all plant surfaces is necessary for the best results, but avoid run-off.
Syngenta do not recommend the application of MAINSPRING via low volume application systems.

Spraying

Applications should be made via hydraulic nozzle applicator e.g. motorised sprayer with hand lance or boom lance or knapsack applications.
Best applied as a MEDIUM spray (as defined by the British Crop Protection Council).
Thoroughly wash all spray equipment with water immediately after use. Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight).

Section 6 of the Health and Safety at Work Act **Additional Product Safety Information**

(This section does not form part of the product label under the Plant Protection Products Regulations 1995)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'Extension of Use' approval or is otherwise permitted under the Plant Protection Products Regulations.

The information on this label is based on the best available information including data from test results.

SAFETY DATA SHEET V1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: MAINSPRING

Design code : A16971B

Product Registration Number: MAPP 19198

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Insecticide

Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Limited

CPC4, Capital Park, Fulbourn, Cambridge CB21 5XE, United Kingdom

Telephone: +44 (0) 1223 883400

Telefax: +44 (0) 1223 882195

E-mail address of person responsible for the SDS: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency telephone number: +44 1484 538444

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :



Signal word: Warning

Hazard statements: H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements: P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing.
 P391 Collect spillage.
 P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as nonhazardous waste.

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

May form combustible dust concentrations in air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
cyantraniliprole	736994-63-1	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 30 - < 50
Substances with a workplace exposure limit :			
silica	61790-53-2 293-303-4		>= 20 - < 30

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison

control center or physician, or going for treatment.

If inhaled: Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.

In case of skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

If swallowed: If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Nonspecific. No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Extinguishing media - small fires - Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires - Alcohol-resistant foam or Water spray

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Fire will spread by smouldering or slow decomposition. As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to protective measures listed in sections 7 and 8. Avoid dust formation.

6.2 Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13). Do not create a powder cloud by using a brush or compressed air. Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep containers tightly closed in a dry, cool and wellventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Further information on storage stability: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

Specific use(s): For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
cyantraniliprole	736994-63-1	TWA	5 mg/m ³	Syngenta
silica	61790-53-2	TWA (Respirable dust)	1.2 mg/m ³	GB EH40

8.2 Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of

these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection

Remarks : No special protective equipment required.

Skin and body protection : No special protective equipment required. Select skin and body protection based on the physical job requirements.

Respiratory protection : No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.

When selecting personal protective equipment, seek appropriate professional advice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : granules

Colour : beige to brown

Odour : odourless

Odour Threshold : No data available

pH : 8 - 11. Concentration: 1 % w/v

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : May form combustible dust concentrations in air.

Burning number: 4 (20 °C), 4 (100 °C)

Upper explosion limit / Upper flammability limit: No data available

Lower explosion limit / Lower flammability limit: No data available

9.2 Other information

Minimum ignition temperature : 675 °C

Minimum ignition energy: 1 - 10 J

Particle size : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : 1 g/cm³

Bulk density : 0.3 - 0.5 g/ml

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: noctanol/water: No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing

SECTION 10: Stability and reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid: No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid: None known.

10.6 Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.04 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Components:

cyantraniliprole:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.2 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit

Result : No skin irritation

Components:

cyantraniliprole:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit

Result : No eye irritation

Components:

cyantraniliprole:

Species : Rabbit

Result : No eye irritation

Respiratory or skin sensitisation

Product:

Test Type : Buehler Test

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

Components:

cyantraniliprole:

Test Type : mouse lymphoma cells

Species : Mouse

Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

cyantraniliprole:

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

cyantraniliprole:

Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

cyantraniliprole:

Reproductive toxicity - Assessment: No toxicity to reproduction

STOT - repeated exposure

Components:

cyantraniliprole:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish :	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.027 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): > 100 mg/l Exposure time: 72 h EC10 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 12 mg/l End point: Growth rate Exposure time: 72 h NOEC (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 1 mg/l End point: Growth rate Exposure time: 72 h

Components:

cyantraniliprole:

Toxicity to fish :	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): > 12.6 mg/l Exposure time: 96 h LC50 (<i>Cyprinodon variegatus</i> (sheepshead minnow)): > 12 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.0204 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): > 13 mg/l Exposure time: 72 h NOEC (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 3.2 mg/l End point: Growth rate Exposure time: 72 h
M-Factor (Acute aquatic toxicity):	10
Toxicity to fish (Chronic toxicity):	NOEC: 2.9 mg/l Exposure time: 28 d Species: <i>Cyprinodon variegatus</i> (sheepshead minnow) NOEC: 10.7 mg/l Exposure time: 28 d Species: <i>Oncorhynchus mykiss</i> (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.00656 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea)
M-Factor (Chronic aquatic toxicity):	10

12.2 Persistence and degradability

Components:

cyantraniliprole:

Biodegradability : Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Components:

cyantraniliprole:

Bioaccumulation : Bioconcentration factor (BCF): < 1

Remarks: Does not bioaccumulate.

12.4 Mobility in soil

Components:

cyantraniliprole:

Distribution among environmental compartments: Remarks: immobile

Stability in soil : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

cyantraniliprole:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Product:

Endocrine disrupting potential: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

ADR	RID	IMDG	IATA
UN 3077	UN 3077	UN 3077	UN 3077

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYANTRANILIPROLE)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYANTRANILIPROLE)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYANTRANILIPROLE)

IATA : Environmentally hazardous substance, solid, n.o.s. (CYANTRANILIPROLE)

14.3 Transport hazard class(es)

ADR	RID	IMDG	IATA
9	9	9	9

14.4 Packing group

ADR	RID	IMDG	IATA (Cargo)	IATA (Passenger)
Packing group : III Classification Code : M7 Hazard Identification Number : 90 Labels : 9 Tunnel restriction code : (-)	Packing group : III Classification Code : M7 Hazard Identification Number : 90 Labels : 9	Packing group : III Labels : 9 EmS Code : F-A, S-F	Packing instruction (cargo aircraft): 956 Packing instruction (LQ) : Y956 Packing group : III Labels : Miscellaneous	Packing instruction (passenger aircraft): 956 Packing instruction (LQ): Y956 Packing group : III Labels : Miscellaneous

14.5 Environmental hazards

ADR	RID	IMDG	IATA (Cargo)	IATA (Passenger)
Environmentally hazardous : yes	Environmentally hazardous : yes	Marine pollutant : yes	Environmentally hazardous : yes	Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII): Not applicable

REACH - Candidate List of Substances of Very High : Not applicable

Concern for Authorisation (Article 59). Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable

UK REACH List of substances subject to authorisation (Annex XIV): Not applicable

GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

	Quantity 1	Quantity 2
E1 ENVIRONMENTAL HAZARDS	100 t	200 t

Other regulations:

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard

Aquatic Chronic : Long-term (chronic) aquatic hazard

GB EH40 : UK. EH40 WEL - Workplace Exposure Limits

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx

- Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative.

Further information

Other information:

Classification of the mixture: Classification procedure:

Aquatic Acute 1 H400 Based on product data or assessment

Aquatic Chronic 1 H410 Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

0892/2022



Mainspring®

GROUP 28 INSECTICIDE


Product registration number: MAPP 19198

A water dispersible granule containing 400 g/kg cyantraniliprole.

For the control of Western flower thrips (*Frankliniella occidentalis*), Golden twin-spot moth (*Chrysodeixis chalcites*) and Beet army worm (*Spodoptera exigua*) on protected ornamental plant production (grown in organic media) (permanent protection with full enclosure), ornamental plant production (grown in synthetic rooting media) (permanent protection with full enclosure).

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

In case of toxic or transport emergency ring (01484) 538444 any time

300 g

Syngenta UK Limited
CPC 4, Capital Park, Fulbourn,
Cambridge CB21 5XE
Tel: Cambridge (01223) 883400

L1089959 GBRI/06A PPE 4163297

MAINSRING®

A water dispersible granule containing 400 g/kg cyantraniliprole

Warning**Very toxic to aquatic life with long lasting effects.**

Avoid release to the environment.

Wear protective gloves and protective clothing.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment comply with the instructions for use.

MAPP 19198**IMPORTANT INFORMATION**

FOR USE ONLY AS A PROFESSIONAL INSECTICIDE

Crops/situations:	Ornamental plant production (grown in organic media) (permanent protection with full enclosure), ornamental plant production (grown in synthetic rooting media) (permanent protection with full enclosure)
Maximum individual dose: (kg product / ha)	0.25
Maximum total dose:	-
Maximum number of treatments: (per annum)	4
Latest time of application:	-

Other specific restrictions:

The minimum interval between applications is 7 days. 60 days must elapse before any other applications.

Managers must carry out a thermal comfort checklist (see - <http://www.hse.gov.uk/temperature/assets/docs/thermal-comfort-checklist.pdf>) prior to worker re-entry tasks.

If needed, an additional heat stress check list and associated risk assessment must be undertaken (see - <http://www.hse.gov.uk/temperature/assets/docs/heat-stress-checklist.pdf>) and the records retained. Temperature and humidity inside tunnels should be monitored during re-entry tasks. If conditions become such that there is a risk of heat related illness, or workers complain of ill effects, then work must cease until the risk is reduced. It is not acceptable for workers to remove clothing and continue working. Managers must carry out a thermal comfort checklist (see - <https://www.hse.gov.uk/temperature/assets/docs/thermal-comfort-checklist.pdf>) prior to worker re-entry tasks. If needed, an additional heat stress check list and associated risk assessment must be undertaken (see - <https://www.hse.gov.uk/temperature/assets/docs/heat-stress-checklist.pdf>) and the records retained. Temperature and humidity inside tunnels/greenhouses should be monitored during re-entry tasks. If conditions become such that there is a risk of heat related illness, or workers complain of ill effects, then work must cease until the risk is reduced. It is not acceptable for workers to remove clothing and continue working. Only to be used on crops grown in organic media (such as soil or compost) or artificial media (such as rockwool or perlite), either in containers or on impervious surfaces. Not to be used on crops grown in soil.

The use of this product in recirculating water systems in a glasshouse may result in dilute pesticide waste that requires disposal. All dilute pesticide waste must be disposed of safely and legally to protect humans, wildlife and the environment, especially groundwater and surface water. Pesticide disposal advice is detailed in the 'Code of Practice for Using Plant Protection Products (Section 5: Disposing of Pesticide Waste). Dangerous to bees. Do not use where bees are actively foraging. This product should only be applied to crops grown under permanent protection with full enclosure (grown in organic media and synthetic rooting media).

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS

Product names marked ® or ™, the ALLIANCE FRAME logo, the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company

This product label is compliant with the CPA Voluntary Initiative (VI) guidance



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