Environmental Protection Authority
Te Mana Rauhī Taiao

APPLICATION FORM
Pesticides

To obtain approval to import or manufacture a pesticide

Send to Environmental Protection Authority preferably by email (HSApplications@epa.govt.nz) or alternatively by post (Private Bag 63002, Wellington 6140)
Payment must accompany application; see our fees and charges schedule for details.

This form should also be used for

- Antifouling paints ☐
- Fumigants ☐
- Plant protection products ☒
- Timber treatments ☐
- Vertebrate Toxic Agents ☐

Name of the substance to be approved

SmartFresh Inbox

Date

03 April 2020

Completing this application form

1. This form has been approved under section 28 of the Hazardous Substances and New Organisms (HSNO) Act 1996. It only covers the import or manufacture of pesticides to be released in New Zealand under section 28 of the HSNO Act. If you wish to make an application for another type of substance (such as a veterinary medicine or industrial chemical) or for another type of application (such as emergency, special emergency or containment), a different form will have to be used. All forms are available on our website.
2. It is recommended that you contact an Applications Advisor at the Environmental Protection Authority (EPA) as early in the application process as possible. An Applications Advisor can assist you with any questions you have during the preparation of your application including advising on any consultation requirements.
3. Before submitting this application, you may make an informal Status of Substance (SOS) advice request to the EPA. Further information on this process is available on our website. Please note that this is not mandatory and an SOS request is only informal advice.
4. This application form may be used to seek approvals for more than one hazardous substance, if the substances and their uses are of a similar nature.
5. Please make sure that you obtain all appropriate permissions for the use of any data that you have used or provided in this application form, if you are not the owner of such data.
6. Unless otherwise indicated, all sections of this form must be completed for the application to be formally received and assessed. If a section is not relevant to your application, please provide a comprehensive explanation why this does not apply. If you choose not to provide the specific information, you will need to apply for a waiver under section 59(3)(a)(ii) of the HSNO Act. This can be done by completing the section on the last page of this form.
7. Any extra material that does not fit in the application form must be clearly labelled, cross-referenced, and included with the application form when it is submitted.
8. Please add extra rows or tables where needed.
9. You must sign the form (the EPA will accept electronically signed forms) and enclose the application fee (including GST) unless you are already an approved EPA customer. To be recognised by the EPA as an “Approved customer”, you must have submitted more than one application per month over the preceding six months, and have no history of delay in making payments, at the time of presenting an application.
10. Information about application fees is available on the EPA website. If you wish to claim a fee reduction for a reduced-risk-formulated product the appropriate justification must be submitted at the pre-lodgement stage for consideration.
11. All application communications from the EPA will be provided electronically, unless you specifically request otherwise.

Commercially sensitive information

12. The EPA strongly advises applicants to provide as much information relating to the hazard classification and use of their substance as possible to help inform the EPA's assessment as well as for submitters and decision-makers. We expect this information to be publicly available in the application unless there is a genuine argument for it to be considered as commercially sensitive.
13. Commercially sensitive information may be put in a confidential appendix to this form (also available on our website) and be identified as confidential. If you consider any information to be commercially sensitive, please show this in the relevant section of this form providing your detailed reasons for considering it to be commercially sensitive and cross referencing to where that information is located in the confidential section.
14. Any information you supply to the EPA prior to formal lodgement of your application will not be publicly released, unless it has already been made publicly available as part of the consultation process. Following formal lodgement of your application any information in the body of this application form and any non-confidential appendices will become publicly available.
15. Once you have formally lodged your application with the EPA, any information you have supplied to the EPA about your application is subject to the Official Information Act 1982 (OIA). If a request is made for the release of information that you consider to be confidential, your view will be considered in a manner consistent with the OIA and with section 57 of the HSNO Act. You may be required to provide further justification for your claim of confidentiality.

Definitions

Active ingredient	Component of a formulated substance responsible for the pesticidal effect
CAS Number	Chemical Abstracts Service number. This is a unique identifier for a chemical substance
CIPAC Number	Collaborative International Pesticides Analytical Council. The CIPAC code number system is a simple approach for an unambiguous coding of active ingredients and variants used in the area/field of pesticides
Hazardous substance	Any substance with one or more of the following intrinsic properties: • Explosiveness • Flammability • A capacity to oxidise • Corrosiveness • Toxicity (including chronic toxicity) • Ecotoxicity, with or without bioaccumulation, or • which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in this definition

EINECS	European INventory of Existing Commercial chemical Substances
ELINCS	European List of Notified Chemical Substances
IUPAC	International Union of Pure and Applied Chemistry. The world authority on chemical nomenclature
Pesticide	Substance or mixture of substances intended to be used for preventing, controlling, repelling or mitigating any pest (including vertebrates) in areas such as, but not limited to, agriculture, home and garden, rights of way or industrial areas
Professional and non-professional users	Professional users are using pesticides in the course of their job or business (such as farmers and growers or amenity users). Professional use may include the use of formulated substances in order to deliver services to business or private customers Non-professional users are not using pesticides in the course of their job or business (such as lifestyle block owners, general public using pesticides for domestic use, and so on)
Public register name	Name of the formulated substance to be mentioned in a publicly available register and that can be different from the final marketing name
Relabelling	Action of changing the label of a formulated substance intended to be imported in New Zealand in order to meet the EPA criteria for information content. This action can also occur when the formulated substance is repacked into packaging of different sizes
Repackaging	Movement or transfer of a substance from one container to another without a change in composition of the formulation or the labelling content, for sale or distribution
Status Of Substance (SOS) advice	The advice provided in a SOS advice request will include: • Whether or not a substance is hazardous • Whether the substance is covered or not by an existing approval • The hazard classifications of the substance • The potential relevant approval pathway for the substance
Substance	Any of the following: • Any element, defined mixture of elements, compounds or defined mixture of compounds, either naturally occurring or produced synthetically, or any mixtures thereof; • Any isotope, allotrope, isomer, congener, radical or ion of an element or compound which has been declared by the Authority, by notice in the Gazette, to be a different substance from that element or compound; • Any mixtures or combinations of any of the above; • Any manufactured article containing, incorporating or including any hazardous substance with explosive properties. (section 2(1) HSNO Act)

1. Applicant details

1.1. Applicant

Company Name: AgroFresh New Zealand Limited

Contact Name: [redacted]

Job Title: [redacted]

Postal Address (provide only if not the same as the physical)**:** [redacted]

Physical Address: [redacted]

Phone (office and / or mobile)**:** [redacted]

Fax: NA

Email: [redacted]

1.2. New Zealand agent or consultant (if applicable)

Company Name: PF Consultants

Contact Name: [redacted]

Job Title: [redacted]

Postal Address (provide only if not the same as the physical)**:** [redacted]

Physical Address: [redacted]

Phone (office and / or mobile)**:** [redacted]

Fax: NA

Email: [redacted]

1.3. Formal correspondence contact

All formal correspondence will be sent to the contact person for the application identified here

Company Name: PF Consultants

Contact Name: [redacted]

Job Title: [redacted]

Postal Address (provide only if not the same as the physical)**:** [redacted]

Physical Address: [redacted]

Phone (office and / or mobile)**:** [redacted]

Fax: NA

Email: [redacted]

1.4. Invoice contact

Only if different from 1.3. Formal correspondence contact - invoice will be sent to the contact person identified here

Company Name: AgroFresh New Zealand Limited

Contact Name: [redacted]

Job Title: [redacted]

Postal Address (provide only if not the same as the physical)**:** [redacted]

[redacted]

Physical Address: [redacted]

[redacted]

Phone (office and / or mobile)**:** [redacted]

Fax: NA

Email: [redacted]

2. Information about the substance

2.1. Purpose statement or executive summary of the application for the public register

No more than 1,100 characters including the description of the formulated substance to be approved, e.g. Soluble Concentrate 350-400 g active ingredient/L

Sachet containing 0.14 g/kg 1-methylcyclopropene in the form of a vapour releasing powder.

2.2. Type of application

Tick the box(es) that best describe your application

Has 'Status of Substance (SOS) Advice' been obtained from the EPA?

☒ Yes ☐ No

If yes, show the SOS reference number:

APP203079 is the Section 26 decision application code

If yes, is the formulation of the substance different to that submitted at the SOS stage?

(In either case, please provide the composition to the EPA. This may be provided as part of the confidential appendix)

☐ Yes ☒ No

Is the product a new active ingredient to New Zealand?

☐ Yes ☒ No

Does the product contain any viable new organisms, including GMOs?

☐ Yes ☒ No

Does the product contain an ingredient originating from an organism (plant, animal, etc)?[1]

☐ Yes ☒ No

[1] If you tick 'Yes' and the product is being imported, then include a Biosecurity Clearance from the Ministry for Primary Industries New Zealand. If one has been provided with a previous application and is still valid, this may be referenced.

Does the formulated substance contain any nanomaterial?

☐ Yes ☒ No

3. Identity of the substance

Any commercially sensitive information may be provided in the confidential appendix of this form
Provide details on the active ingredient(s) as well as the mixture in this section

3.1. Identity of the active ingredient(s)

Active ingredient (Common Name): 1-methylcyclopropene

Chemical name (IUPAC): 1-methylcyclopropene

Chemical name (CA): 1-methylcyclopropene

Molecular formula: C_4H_6

Structural formula:

Manufacturer development codes: AF10016

CIPAC No: 767

CAS No: 3100-04-7

EEC No (EINECS or ELINCS): Not allocated

Function:

For plant protection products

☐ Herbicide	☐ Microbial strain	☐ Fungicide
☐ Insecticide	☐ Semiochemical (pheromone, attractant, repellent etc.)	☐ Plant Extracts

☒ Other, eg plant growth regulators (specify): Plant Growth Regulator

For timber treatments, Vertebrate Toxic Agents (VTA), anti-fouling paints or fumigants, please describe the function:

FAO Specification (including year of publication): ☒ Yes Year: **2010** ☐ No

Minimum purity of the active ingredient as manufactured (g/kg): 960 g/kg

Note: Any impurities must be provided to the EPA. A certificate of analysis may be included in the confidential appendix.

3.2. Regulatory status of the active ingredient(s)

Jurisdiction	Regulatory status					Comment*
	Never approved	Pending	Approved	Restricted	Not renewed	
Australia	☐	☐	☒	☐	☐	
Canada	☐	☐	☒	☐	☐	
Europe	☐	☐	☒	☐	☐	
Japan	☐	☐	☒	☐	☐	
New Zealand	☐	☐	☐	☐	☐	Not applicable in NZ
USA	☐	☐	☒	☐	☐	
Other jurisdictions (specify in comments)	☐	☐	☒	☐	☐	1-MCP is an accepted treatments in many countries

*For instance, specify here under which regulation(s) or directive(s).

When restricted or not renewed, explanations should be provided:

3.3. Identity of the formulated substance

Formulated substance name: SmartFresh Inbox

Manufacturer development codes: NA

Unique names for public register: SmartFresh Inbox

Active ingredient(s) and content (g/kg or L and % w/w): 1-methylcyclopropene 0.14 g/kg g/kg or L 0.014% (w/w)

3.4. Physical and chemical properties of the formulated substance

Provide as much information as possible on the physical and chemical properties of the substance (at 20°C and 1 atmosphere unless otherwise stated)

Appearance (colour, odour, physical state and form): white powder

pH: 1% solution in water: pH=6.11at 20.6 °C

Density: Bulk Density (Pour/Tap) 0.65 g/ml / 0.68 g/ml

Vapour pressure: not applicable

Boiling/melting point: No Data

Solubility in water: No Data

Water/Octanol partitioning co-efficient: No Data

Flammability (solids): Not highly flammable

3.5. Regulatory status of the formulated substance

Jurisdiction	Regulatory status					Comment*
	Never approved	Pending	Approved	Restricted	Not renewed	
Australia	☐	☐	☐	☐	☐	
Canada	☐	☐	☐	☐	☐	
Europe	☐	☒	☐	☐	☐	
Japan	☐	☐	☐	☐	☐	
New Zealand	☐	☒	☐	☐	☐	
USA	☐	☐	☒	☐	☐	
Other jurisdictions (specify in comments)	☐	☐	☒	☐	☐	China

*For instance, specify here under which regulation(s) or directive(s).

Has an application been made for an approval under the Agricultural Compounds and Veterinary Medicines Act?

☒ Yes ☐ No

3.6. Composition details of the formulated substance

Full composition details for the substance must be provided to the EPA. These may be included in the confidential appendix

See Confidential Appendix 1 of this application

4. Life cycle of the substance

Manufacturing

Will your formulated substance be manufactured in New Zealand?

☐ Yes ☒ No

Importation

Will your formulated substance be imported into New Zealand by air and/or sea?

☒ Sea ☒ Air

Will your formulated substance be imported in bulk containers or packaged ready for sale?

☐ Bulk Containers ☒ Packaged ready for sale

If your formulated substance will be imported in bulk containers, please describe these containers:

Will repackaging of your formulated substance be carried out in New Zealand?

☐ Yes ☒ No

Will relabelling of your formulated product be carried out in New Zealand?

☐ Yes ☒ No

Please provide any additional relevant information relating to the importation of your formulated substance:

Transport

Will your formulated substance be transported by road, rail, air and/or sea within New Zealand?

☒ Road ☒ Sea ☒ Rail ☐ Air

Please provide any additional information relating to transport of your formulated substance:

UN Number: Not regulated

UN Transport Hazard Classes: Not regulated

UN Packing Group Number (UN Model Regulations[2]): Not regulated

Marine Pollutant? (IMDG Code[3]): Not regulated

Packaging

Pack sizes: **0.625 g, 1.25 g or 2.5 g sachets multiples packaged in a flexible foil laminated outer pouch in packs of 100 – 1000 sachets**

Type of packaging:

Sachet packaging: Heat sealable Non-woven material (paper, polymer (e.g. polylactic acid), specification 28±1 gram

Outer foil pouch: Mylar foil laminate includes tear strip and re-closable zipper strip, specification 28 cm x 41 cm x 14.6 cm

Type of closure (consider opening size, type of cap, child resistant packaging): Sachets are heat sealed and contained within a tear strip/re-closable zipper strip outer pouch

Please provide any additional information relating to the packaging of your formulated substance:

Storage

Provide details of how the substance will be stored, and the facilities it will be stored in:

Store in original sealed pouch in a dry, cool area away from foodstuffs. Store in accordance with NZS 8409 Management of Agrichemicals.

SmartFresh Inbox triggers; 9.1C (Aquatic ecotoxicity) hazard classifications. As such, once imported, its storage will be subject to appropriate default controls for storage and secondary containment of 9.1C substances under the HSNO / HSWA Acts and their regulations.

Appropriate label recommendations and safety data sheet recommendations are provided to direct the user/transporter to observe correct storage requirements in accordance with the HSNO/HSWA Acts and their regulations.

The product label includes the following storage statement:

Store in the closed, original container in a cool, dry, well ventilated area. Do not store for prolonged periods in direct sunlight.

[2] UN Model Regulations mean Model Regulations annexed to the most recently revised edition of the Recommendations on the Transport of Dangerous Goods published by the UN
[3] IMDG Code means that International Maritime Dangerous Goods code, as amended

Warehouse storage

Provide details of how the formulated substance will be stored:

SmartFresh Inbox will be stored at mercantile outlets or warehouses meeting HSNO requirements for the storage of hazardous substances and in accordance with label instructions. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations.

The product Safety Data Sheet provides further information. Storage of certain quantities of this product may trigger specific storage requirements.

Containment of spillages: Use personal protective equipment as required. Stop spill if safe to do so, and contain spill. Sweep up and shovel or collect spill residues into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, sweep area preventing formulation from entering drains. If a significant quantity of material enters drains, advise emergency services.

Decontamination of areas, personnel, vehicles and buildings:

Do not flush into surface water or sanitary sewer system. Take up mechanically, placing in appropriate containers for disposal. After a spillage, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Recover mechanically, placing in appropriate labelled containers for disposal.

Disposal

Disposal of damaged packaging, contaminated absorbents and other materials: Do not dump into sewers or waterways. To be disposed of as a class 9 hazardous waste using licensed operators.

Detailed instructions for safe disposal of the formulated substance and its packaging: It is intended that this product is fully consumed during use. Waste and empty containers must be disposed of according to current, local/national legislation for class 9.1C substances.

Container Disposal: - Bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.

Product Disposal: - If possible consume by using as directed on product label. Dispose of any unwanted product as a hazardous substance using a licenced waste disposal

Methods other than controlled incineration for disposal: None specified

5. Intended uses of the formulated substance

The information you provide here will be used by the EPA to assess the risks posed by the substance and the controls assigned to manage these risks. You must outline either all the proposed uses of the product or the worst-case scenario for each application method (considering both the application rate and the frequency). **Please use table 5.1 for plant protection products or table 5.2 for all other types of pesticides.** Explanatory notes are below each table.

5.1. Intended uses for plant protection products

You must outline either all the proposed uses of the product or the worst case scenario for each application method (considering both the application rate and frequency)

Crop and/or situation (a)	Product Code	F G or I (b)	Pest or group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks (m)
				Type (d-f)	Conc of as (i)	Method kind (f-h)	Growth stage and season (j)	Number min max (k)	Interval between applications (min)	Kg as/hL min max	Water L/ha min max	Kg as/ha min max		
Post harvest fumigation within boxes of	NA	I	Post-harvest treatment of fruits for improved	Vapour releasing powder	0.14 g/kg	Fumigation within shipping boxes	Immediately post harvest	Min:1 Max:1	Not applicable	Not applicable Min:	Not applicable Min:	Not applivable Min: 0.000	0	Min application rate is based on 1 x

Crop and/or situation (a)	Product Code	F G or I (b)	Pest or group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks (m)
				Type (d-f)	Conc of as (i)	Method kind (f-h)	Growth stage and season (j)	Number min max (k)	Interval between applications (min)	Kg as/hL min max	Water L/ha min max	Kg as/ha min max		
kiwifruit or apples:			quality after shipping, storage or handling			containing fruit				Max:	Max:	009722 g a.i./kg fruit in a box Max:0.000024121 g a.i./kg fruit in a box		0.625 g sachet in a box containing 9 kg fruit. Max application rate is based on 10 x 2.5 g sachet in a box

Crop and/or situation (a)	Product Code	F G or I (b)	Pest or group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks (m)
				Type (d-f)	Conc of as (i)	Method kind (f-h)	Growth stage and season (j)	Number min max (k)	Interval between applications (min)	Kg as/hL min max	Water L/ha min max	Kg as/ha min max		
														conytaining 145.1 kg fruit

(a) For crops, the EU and Codex classifications (both) should be used; where relevant, the use situation should be described (*eg* fumigation of a structure)
(b) Outdoor or field use (F), glasshouse application (G) or indoor application (I)
(c) eg biting and suckling insects, soil born insects, foliar fungi, weeds
(d) eg wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
(e) GCPF Codes - GIFAP Technical Monograph No 2, 1989
(f) All abbreviations used must be explained
(g) Method, eg high volume spraying, low volume spraying, spreading, dusting, drench
(h) Kind, eg overall, broadcast, aerial spraying, row, individual plant, between the plants - type of equipment used must be described
(i) g/kg or g/l
(j) Growth stage at last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, season at time of application
(k) The minimum and maximum number of applications possible under practical conditions of use must be provided
(l) PHI - minimum pre-harvest interval
(m) Remarks may include: extent of use, economic importance and restrictions

5.2. Intended use for pesticides not used as plant protection products (eg timber treatments, Vertebrate Toxic Agents (VTA), anti-fouling paints or fumigants)

You must outline either all the proposed uses of the product or the worst case scenario for each application method (considering both the application rate and frequency)

User (a)	Area of Use (b)	Pest or group of pests controlled (c)	Application			Application rate per treatment (f)	Remarks (g)
			Method (d)	Number min max (e)	Interval between applications - days (minimum)		

(a) Professional/non professional
(b) Domestic/commercial/industrial
(c) e.g. biting and suckling insects, soil born insects, foliar fungi, weeds
(d) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
(e) The minimum and maximum number of applications possible under practical conditions of use must be provided
(f) g/kg and g/l or others
(g) Remarks may include; extent of use, economic importance and restrictions

6. HSNO hazard classifications of the formulated substance

The information you provide here will form the basis of your substance's HSNO classification.

Please consider each of the hazardous properties in the table below and provide information on those properties that trigger any threshold level for your substance. Use the justification column to record the reason for your classification. If your substance is a mixture, you can apply mixture rules to the hazardous components of the mixture. If you do this, you will need to provide information on the hazardous properties of each hazardous component of the mixture, and show your workings. See Assigning A Product to an HSNO Approval on our website for more information.

Please use the following abbreviations if needed.

NA: Not Applicable – For instance when testing is technically not possible: testing for a specific endpoint may be omitted, if it is technically not possible to conduct the study as a consequence of the properties of the substance: eg very volatile, highly reactive or unstable substances cannot be used, mixing of the substance with water may cause danger of fire or explosion or the radio-labelling of the substance required in certain studies may not be possible.

ND: No Data or poor quality data (according to Klimisch criteria) – where there is a lack of data.

No: Not Classified based on actual relevant data available for the substance – the data is conclusive and shows the threshold for classification is not triggered.

Hazard Class/Subclass	Formulated substance classification	Justification
Examples	3.1C 6.1D	Flashpoint = 46 deg C (closed cup) Calculated LD50 = 1250 mg/kg (mixture rules)
Class 1 Explosiveness	ND	NA
Class 2, 3 & 4 Flammability	ND	NA
Class 5 Oxidisers/Organic Peroxides	ND	NA
Subclass 8.1 Metallic corrosiveness	ND	NA
Subclass 6.1 Acute toxicity (oral)	ND	NA
Subclass 6.1Acute toxicity (dermal)	ND	NA
Subclass 6.1 Acute toxicity (inhalation)	ND	NA
Subclass 6.1 Aspiration hazard	ND	NA
Subclass 6.3/8.2 Skin irritancy/corrosion	ND	NA

Subclass 6.4/8.3 Eye irritancy/corrosion	ND	NA
Subclass 6.5A Respiratory sensitisation	ND	NA
Subclass 6.5B Contact sensitisation	ND	NA
Subclass 6.6 Mutagenicity	ND	NA
Subclass 6.7 Carcinogenicity	ND	NA
Subclass 6.8 Reproductive or developmental toxicity	ND	NA
Subclass 6.8 Reproductive or developmental toxicity (known, presumed or suspected)	ND	NA
Subclass 6.8 Reproductive or developmental toxicity (*via* lactation)	ND	NA
Subclass 6.9 Target organ systemic toxicity[4]	ND	NA
Subclass 9.1 Aquatic ecotoxicity	9.1C(Aquatic)	Assigned by EPA in S26 see APP203079
Subclass 9.2 Soil ecotoxicity	ND	NA
Subclass 9.3 Terrestrial vertebrate ecotoxicity	ND	NA
Subclass 9.4 Terrestrial invertebrate ecotoxicity	ND	NA

[4] identify classification for single and/or repeat dose target organ toxicity for oral, dermal or inhalation routes

7. Risks, costs and benefits

These are the positive and adverse effects referred to in the HSNO Act. It is easier to regard risks and costs as being adverse (or negative) and benefits as being positive. In considering risks, cost and benefits, it is important to look at both the likelihood of occurrence (probability) and the potential magnitude of the consequences, and to look at distribution effects (who bears the costs, benefits and risks).

You will need to consider the effects on the environment and human health and welfare, including any social effects.

In each section below, set out the information under the following three sub-headings:

- Costs and benefits which can be stated in monetary (dollar) terms
- Non-monetary risks and costs
- Non-monetary benefits.

You must fully complete this section, referencing supporting material. You will need to provide a description of where the information in the application has been sourced from, e.g. from; in-house research, independent research, technical literature, community or other consultation, and provide that information with this application.

7.1. Identify all of the potential risks, costs and benefits of the substance(s)

Identification is the first step in assessing risks, costs and benefits. It is important to think about the source of the risk, i.e. the way in which the risk is created (the exposure pathway), and then the consequences and likelihood of exposure.

You should try to think as widely as possible about every potential risk, cost and benefit and give a brief description.

Identification of potential risks

Risks associated with the use of SmartFresh Inbox are directly related to its overall hazard classification. The overall hazard classification for SmartFresh Inbox is 9.1C (Aquatic ecotoxicity). When compared to the use pattern of SmartFresh Inbox (a post harvest treatment within boxes of fruit for sale or further cool storage) there is limited opportunity for the product to enter waterways. As such the product has a very low/negligible overall risk to user and the environment. Details of the potential risks during the product lifecycle are further discussed in section7.2 of this application.

Identification of potential costs

Costs may arise from remediation of spills and unintended damage to flora and fauna from such an incident. The product is offered for sale in small to moderate pack sizes.

The smaller pack sizes of product will mitigate the potential for large spillages to occur. It is more likely that isolated small packs could be damaged in a transport accident leading to a minor spillage of the contents. These effects would be short term, isolated and reversible.

Other costs could arise from health effects from exposure however the potential for these costs is unlikely if the product is used as directed and the correct working practices and use in well ventilated areas is observed.

Exposure and hence risk can be further reduced by observance of good working practices such a using trained professional personnel at each phase of the product lifecycle and detailed directions for the safe use of the product including emergency management measures.

Identical active ingredient has already been approved by the Authority but with different use pattern and concentration.

Identification of Benefits

- SmartFresh Inbox is a very low hazard product for users containing 1-MCP for post harvest treatment of apples and kiwifruit for improved quality after shipping, storage and handling.
- The product is fully biodegradable and leaves no harmful residues.
- Provides more product choice in the marketplace.
- Low usage rate.

7.2. Provide an assessment of those risks, costs, and benefits identified in Section 7.1

This section excludes risks, costs, and benefits which relate specifically to Māori taonga or to international agreements. See Sections 7.3 and 7.4 for those aspects.

A full assessment must be provided of all the risks, costs and benefits identified in Section 7.1.For the risk assessment our preferred format is quantitative, however, you may also provide a qualitative assessment if you can justify this. If you are providing your risk assessment in supporting documentation with this application you can provide a summary of all the risks this in this section.

Please note that if you do not complete a full assessment of all risk, costs and benefits this may result in the EPA requesting further information from you, which will mean that your application takes longer to process.

Assessment of Risks

Description	Hazard	Magnitude	Likelihood	Effect Level	Comments
Spillages	9.1C (aquatic ecotoxicity)	Minimal/Minor	Very Unlikely	Low / Negligible	SmartFresh Inbox marketed in a range of sealed sachets within sealed pouches. Potential spillage of the concentrated product could range from minor to moderate volumes. Operators and transporters would have access to appropriate PPE during a spill situation. Water bodies containing aquatic life would be the most sensitive receptors. Spills of the concentrated product entering watercourses are expected to be unlikely. The product triggers a 9.1C (Aquatic ecotoxicity) classification and hence transport is not considered a dangerous good for transport. Land spills would be contained and treated by collection into appropriate containers.
Manufacturing and packaging	9.1C (aquatic ecotoxicity)	Minimal/Minor	Very Unlikely	Low / Negligible	Manufacturing and packaging facilities are located overseas and will meet the local jurisdictional requirements for hazardous substances management during this phase of the product lifecycle. Since manufacturing will be overseas no effects to NZ workers are envisaged during this phase of the product lifecycle.

Description	Hazard	Magnitude	Likelihood	Effect Level	Comments
Importation transport and storage	9.1C (aquatic ecotoxicity)	Minimal/Minor	Very Unlikely	Low / Negligible	The product is shipped in range of sealed sachets within sealed pouches. Workers and bystanders would only be exposed to the substance during this part of lifecycle in isolated incidents where a spillage has occurred. It is Very unlikely that any repeat exposures would result hence chronic effects would be negligible. Should spillage enter a waterway the effects would be contained to that waterway and this is seen as a very unlikely scenario and affects would be immediate but not long lasting.
Use	9.1C (aquatic ecotoxicity)	Minimal/Minor	Very Unlikely	Low / Negligible	SmartFresh Inbox is labelled to identify potential risks to users and the environment. Precaution and response statements to minimise exposure and adverse effects to users. Users are directed by label instructions to use suitable PPE during use. Acute toxicity is negligible. No chronic effects have been identified. SmartFresh Inbox is ready for use in the provided sachets. There is no preparation or mixing of this product required. Adherence to HSNO / HSWA requirements for PPE and the provision of hazard and precautionary information on the product label and in the product SDS will mitigate potential exposure risks/pathways.

Description	Hazard	Magnitude	Likelihood	Effect Level	Comments
Off Target Effects (e.g. Exposure to general public and bystanders)	9.1C (aquatic ecotoxicity)	Minimal/Minor	Very Unlikely	Low / Negligible	This is not envisaged a potential route of exposure for the concentrate except during a public spillage incident (e.g. during transport which would be a very rare occurrence). The product is applied by trained commercial contractors as a ready to use product of very low active ingredient concentration hence the toxic and ecotoxic effects expressed for the formulation are further reduced. As the product is to be applied in commercial agricultural post-harvest locations which are generally sparsely populated and where access by general public or bystanders is generally not permitted particularly during working operations.
Disposal	9.1C (aquatic ecotoxicity)	Minimal/Minor	Very Unlikely	Low / Negligible	It is intended that the product will be entirely consumed according to its intended use. Empty packaging will be disposed of to landfill. Unwanted material shall be treated as a class 9 hazardous waste and will be treated accordingly via licensed waste contractors. Label directions and product SDS will inform the user of responsible means of disposal of product and packaging. Disposal will be in accordance with the requirements of the Hazardous Substances (Disposal) Regulations 2001 the Resource Management Act 1991 and local regulations.

Assessment of Costs

Costs arising from approval of SmartFresh Inbox are likely to be minimal. The qualitative assessment of risks in section 7.1 indicates that the overall risk profile for the product is low/negligible for all stages of the product lifecycle due to its overall low hazard profile.

Further quantitative information on incidents involving insecticides can be found in the HSNO Monitoring Report 2018 which provides the most up to date, publically accessible information on incidents involving agricultural and industrial products.

Assessment of Benefits

- SmartFresh Inbox is a very low hazard product containing containing 1-MCP for post harvest treatment of apples and kiwifruit for improved quality after shipping, storage and handling.
- The product is fully biodegradable and leaves no harmful residues.
- Provides more product choice in the marketplace.
- Low usage rate.

7.3. Provide an assessment of any risks, costs and benefits which arise from the kaitiaki relationship of Māori and their culture to the environment

Please note that consultation with Māori may be appropriate for this application. Please refer to the EPA policy 'Engaging with Māori for applications to the EPA' which can be found on the EPA website (www.epa.govt.nz) or contact the EPA for advice.

An example of the issues to consider include whether the substance poses any risk to native or valued species, or waterways.

The applicant recognises the role of Māori in relation to cultural, spiritual, ethical and socio-economic values pertaining to the use of hazardous substances in the environment.

SmartFresh Inbox is plant growth regulator of low toxicity similar to products already approved by the Authority.

It is a low toxicity product which is not expected to cause any adverse impacts when used as directed.

SmartFresh Inbox is an aquatic ecototoxicant and has been assigned 9.1C(Aquatic) by the EPA in a Section 26 application under the HSNO classification system

The product is designed for use in areas specifically used to pack apples and kiwifruit into boxes for transport to point of sale or further cool storage.

Such areas are unlikely to be directly accessed by Maori for mahinga kai (traditional food sources) and the product leaves no harmful residues and is very unlikely to directly enter

to food chain in quantities that would exceed any default MRLs. No MRL's are set for this active.

Label instructions are provided to mitigate potential harm to users and the environment. This will serve to help protect Ngā Moana, Roto, Awa, Manga (waterways).

The controlled use of SmartFresh Inbox is unlikely to adversely impact traditional Maori food and natural resources, including indigenous flora, fauna, land, water and other taonga when applied as directed.

The controlled use of SmartFresh Inbox will not breach the principles of the Treaty of Waitangi.

7.4. Provide an assessment of any risks, costs or benefits to New Zealand's international obligations

Please show if approving or declining the substance would have any impact upon New Zealand's international obligations

No international obligations have been identified. The applicant is unaware of any adverse impacts approving or declining this application would have on New Zealand's international obligations.

7.5. Provide information on the proposed management of the substance

Please outline how the risks of the substance will be managed. This may include default controls triggered by the hazardous property classification(s) and reference to Codes of Practice or to standard operating procedures that will be followed

Product Lifecycle.

Importation

SmartFresh Inbox will be imported as a finished product and supplied to agricultural mercantile outlets for retail to professional users.

Storage

SmartFresh Inbox triggers a 9.1C (Aquatic) hazard classification. As such its storage will be subject appropriate HSNO controls for 9.1C substances during storage. Appropriate label recommendations and safety data sheet recommendations are provided to direct the user/transporter to observe correct storage and segregation requirements in accordance with the act and its regulations.

Transport/Distribution

SmartFresh Inbox will be transported and distributed in accordance with the requirements of the Land Transport Rule to mercantile outlets where it will be purchased by end users. SmartFresh Inbox is not a Dangerous Good for transport.

Use

SmartFresh Inbox will be applied to apples and kiwifruit as post-harvest within storage box fumigation. Application methods, usage rates and use situations are indicated on the product label and comply with the principles of GAP. It is expected that the product will be entirely consumed during use leaving only trace quantities of carrier (dextrose) in the packaging.

Disposal

SmartFresh Inbox will remain in the labelled sachet and outer pouch container until fully consumed. The empty containers will disposed of to landfill via commercial refuse collection. Any unwanted material shall be treated as a hazardous waste and will treated as appropriate.

Disposal will be in accordance with the requirements of the Hazardous Substances (Disposal) Notice 2017, the Resource Management Act 1991 and local regulations.

7.6. Provide an overall evaluation of the combined impact of all of the risks, costs and benefits set out in sections 7.2, 7.3 and 7.4

Please express a view on the relative importance of the different risks, costs and benefits and how they should be brought together in making a decision

SmartFresh Inbox provides users with a low hazard, low product concentrate for the Post-harvest treatment of fruits for improved quality after shipping, storage or handling in apples and kiwifruit.

Potential costs that might occur from its use have been shown to be low/negliable when used in accordance with label directions.

Misuse of the product, as with any agricultural chemical, could lead to further costs. However since the product is of a very low hazard and its intended use is by trained commercial professionals, this is unlikely.

The benefits of approving the substance have been identified as:

- Very low hazard product for improved quality after shipping, storage or handling in apples and kiwifruit.
- The product is fully biodegradable and leaves no harmful residues.
- Provides more product choice in the marketplace.
- Low usage rate.

The responsible use of SmartFresh Inbox will have no effect on Maori cultural values or breach the principles of Treaty of Waitangi.

The product life cycle is adequately controlled by default HSNO controls and the provision of NZ compliant labelling and product safety data sheet.

The product is manufactured and marketed by a professional and experienced agricultural chemical company for use by trained operators.

The approval of SmartFresh Inbox will provide users with access to a plant growth regulator for improved quality after shipping, storage or handling of fruit which leaves no residues when used as directed.

Approval of the product is consistent with the aims of prevailing HSNO/HSWA Regulations, the ACVM Act and the principles of GAP.

8. Pathway determination and rapid assessment

Under the HSNO Act, applications may be processed under different pathways, including a rapid assessment. The pathway for your application will be determined after its formal receipt, based on the data provided in this application form. If you would like your application to be considered for rapid assessment (as per the criteria below), we require you to complete the attached statutory declaration and provide a signed hard copy.

Please note that the EPA will not be able to proceed with the rapid assessment without the statutory declaration.

8.1. Rapid assessment

Under the HSNO Act, a hazardous substance may be approved under a rapid assessment if one of the three following options is satisfied. Please show the section that is relevant to your application.

A substance having a similar composition and similar hazardous properties has been approved	☐ Yes ☒ No If Yes, please give the name of the reference substance:
The substance has one or more hazardous properties and each has the least degree of hazard for that property; or	☐ Yes ☒ No
The substance has been formulated so that one or more of its hazardous properties has a lesser degree of hazard than any substance that has been approved under the Act.	☐ Yes ☒ No

8.2. Statutory Declaration

I [redacted] name], of [redacted] [occupation/position], being the applicant or authorised to do so on behalf of the applicant, verify that the information contained in this application for SmartFresh Inbox [substance name] is true and correct. I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths and Declarations Act 1957.

Signature

Declared at on this day of , 20 before me.

Witness signature

[name] Barrister or Solicitor of the High Court of New Zealand

[or Justice of the Peace, Notary Public, or other person authorised to take a statutory declaration]

9. Checklist

This checklist is to be completed by the applicant

Application		**Comments/justifications**
All sections of the application form completed or you have requested an information waiver under section 59 of the HSNO Act	☒ Yes ☐ No (If No, please discuss with an advisor to enable your application to be further processed)	
Confidential data as part of the confidential form. Please note the EPA strongly encourages applicants to provide as much information as possible in the main body of the application form unless there is a genuine argument that it is commercially sensitive.	☐ Yes ☒ No	Confidential data supplied as part of previous S26 application (decision attached as part of this application). All reports/data supplied to the EPA in the S26 application remain confidential if used in this S28 application
Supplementary optional information attached:		
◦ Copies of additional references	☐ Yes ☒ No	
◦ Letter(s) of access	☐ Yes ☒ No	
◦ Relevant correspondence	☐ Yes ☒ No	
◦ Draft label	☒ Yes ☐ No	
◦ Draft Safety Data Sheet (SDS)	☒ Yes ☐ No	
Administration		
Are you an approved EPA customer?	☐ Yes ☒ No If yes are you an: Applicant: ☐ Agent: ☒	I am the consultant.
If you are not an approved customer, payment of fee will be by: ◦ Direct credit made to the EPA bank account (preferred method of payment) Date of direct credit:	☒ Yes ☐ No ☒ Payment to follow when invoiced	Please invoice: Patrick Farrell PF Consultants PO Box 4352 Hamilton East Hamilton 3247
◦ Cheque for application fee enclosed	☐ Yes ☒ No ☐ Payment to follow	Application fee of $1150.00 made by internet banking transfer on 03 April 2020 from PF Consultants using

		the Payee reference SmartFresh
Electronic signed copy of application e-mailed to the EPA	☒ Yes	
Physical copy of signed statutory declaration sent to the EPA, (rapid assessment only)	☐ Yes	Not required

Signature of applicant or person authorised to sign on behalf of applicant

☒ I am making this application, or am authorised to sign on behalf of the applicant or applicant organisation.

☒ I have completed this application to the best of my ability and, as far as I am aware, the information I have provided in this application form is correct.

[redacted]

Signature **Date**

Request for information waiver under section 59 of the HSNO Act

☐ I request for the Authority to waive any legislative information requirements (i.e. concerning the information that has been supplied in my application) that my application does not meet (tick if applicable).

Please list below which section(s) of this form are relevant to the information waiver request: