

Public consultation

*HAZARDOUS SUBSTANCES
SAFE WORK INSTRUMENTS*

December 2020



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Purpose

This consultation seeks public comment on amendments to two existing safe work instruments and one new safe work instrument proposed to be made under the Health and Safety at Work Act 2015 (HSWA) for the purposes of the [Health and Safety at Work \(Hazardous Substances\) Regulations 2017](#) (the Regulations). The proposed safe work instruments (SWIs) apply to the following hazardous substances:

- **AFE-HFP** and **Tri-Form 80** (fumigants)
- **Hercon Vaportape II Insecticidal Strips** (a pesticide)
- **NPD 100 PLUS** (a retail fuel).

Tri-Form 80 and Hercon Vaportape II Insecticidal Strips have not yet been approved by the Environmental Protection Authority (EPA).

Your feedback will help WorkSafe determine whether the requirements in the proposed SWIs are appropriate for these four substances.

How to have your say

You can find the SWIs and the response forms on the [consultations](#) page of our website.

Please complete a separate response form for each SWI that you would like to comment on. WorkSafe's email and postal addresses are included on each form.

The deadline for receipt of all submissions is **5pm on Friday 5 February 2021**.

Your submission may be made public

The Official Information Act 1982 (OIA) allows New Zealand citizens and permanent residents, or anyone in New Zealand, to request official information from the government – including copies of submissions. WorkSafe will let you know if we receive an OIA request for a copy of your submission. The content of your submission may be made available to the public, however you can indicate on the response form whether you would prefer your details to be kept confidential.

WorkSafe will manage any personal information you supply in accordance with the Privacy Act 2020.

Next steps

Once the consultation period has ended, we will analyse submissions and finalise the proposed SWIs after considering all feedback received.

The SWIs will then be presented to the Minister for Workplace Relations and Safety (the Minister) for approval. If the Minister approves the SWIs, we will then:

1. notify the SWIs in the *New Zealand Gazette*
2. publish the SWIs on WorkSafe's website.

We will seek approval 'in principle' for the SWIs that deal with the two substances not yet approved by the EPA. For these SWIs, the steps above will happen if the EPA approves the substances.

Our contact details

If you have any questions about this consultation, please contact:
regulatory.frameworks@worksafe.govt.nz

About safe work instruments

A safe work instrument (SWI) is a form of legislation that supports or complements regulations. SWIs allow for greater flexibility and more timely updates to the regulatory framework, reflecting changes in technology, standards, and health and safety practices.

The WorkSafe New Zealand Act 2013 gives WorkSafe the function of developing SWIs. Section 227 of HSWA allows SWIs to be developed to define terms, prescribe matters, or make other provision in relation to any activity or thing, including (without limitation) listing standards, control of substances, and competency requirements. SWIs have legal effect only where they are referred to in regulations.

A SWI must be approved by the Minister before it can take effect. Before approving a SWI, the Minister must be satisfied that the appropriate persons and organisations have been consulted.

There is more information about SWIs on our website: worksafe.govt.nz

This consultation covers three proposed safe work instruments

We would like your feedback on three proposed SWIs.

This section includes brief information about the substances that each SWI covers and the reasons for the proposed changes.

1. Amendments to the *Health and Safety at Work (Hazardous Substances – Requirements for Specified Fumigants) Safe Work Instrument 2017*

Part 14 of the Regulations specifies requirements for fumigants that are in addition to those applying to class 6 and 8 substances generally under Part 13 of the Regulations. The [Health and Safety at Work \(Hazardous Substances – Requirements for Specified Fumigants\) Safe Work Instrument 2017 \(the Specified Fumigants SWI\)](#) contains additional and modified requirements applying to particular fumigants.

AMENDMENT FOR AFE-HFP

What is AFE-HFP?	AFE-HFP is a liquid pre-planting soil fumigant used to control a range of soil-borne diseases, plant parasitic nematodes, symphylans, and wireworms, and to suppress weeds. Its active ingredients are chloropicrin and dichloropropene.
Classifications	6.1A inhalation, 6.1B oral and dermal, 6.5A, 6.5B, 6.6B, 6.7B, 6.9A oral and inhalation, 8.2C, 8.3A
EPA status	Approved
HSNO Approval number	HSR101251

Regulation 14.26(3) of the Regulations allows a relevant SWI to prescribe modified soil condition requirements applying to the application of fumigants.

What are we proposing?

WorkSafe proposes an amendment to the Specified Fumigants SWI.

The proposed SWI requires a Person Conducting a Business or Undertaking (PCBU) with management or control of fumigation using AFE-HFP to ensure at the beginning of the application that:

- a. the soil temperature at the depth of injection of AFE-HFP is a minimum of 5°C and does not exceed 27°C, and
- b. the moisture content of the soil is:
 - i. equal to or more than 70% when measured with a tensiometer, or
 - ii. between 50-75% as defined by the USDA Feel and Appearance method.

Why are we proposing this?

Soil condition requirements have been updated

The Specified Fumigants SWI requires the soil condition requirements of regulation 14.26(2) to be met before beginning the application of AFE-HFP.

The EPA has advised WorkSafe that it has:

- through a reassessment in December 2012, formally changed its requirements in relation to the minimum soil temperature
- identified a technical error in the moisture content range (when the range is defined by the USDA Feel and Appearance method).

An amendment to the Specified Fumigants SWI is required for consistency with the EPA's reassessment. The increase in risk from using AFE-HFP at soil temperatures down to 5°C is considered negligible, provided plastic sheeting is used to cover the soil. It will also allow the use of the fumigant in more geographical areas.

The updated soil condition requirements will also apply to Tri-Form 80, as described in the Annex of this consultation document.

AMENDMENTS FOR TRI-FORM 80 - FUMIGANT

What is Tri-Form 80?	Tri-Form 80 is a liquid pre-planting soil fumigant used to manage soil-borne diseases and plant parasitic nematodes, and to suppress weeds. Its active ingredients are chloropicrin and dichloropropene.
Classifications	6.1A inhalation, 6.1B oral and dermal, 6.5A, 6.5B, 6.6B, 6.7B, 6.9A oral and inhalation, 8.2C, 8.3A
EPA status	Not yet approved
Provisional HSNO approval number	HSR101451

Many regulations in Part 14 place requirements on specific fumigants and also enable SWIs to be made that apply these requirements to other fumigants.

The Annex of this consultation document describes the requirements for Tri-Form 80 and lists the regulations that will be applied to the substance.

What are we proposing?

WorkSafe proposes an amendment to the Specified Fumigants SWI to apply the requirements listed in the Annex to Tri-Form 80.

Why are we proposing this?

Including Tri-Form 80 in this SWI will ensure it is subject to the same requirements as Tri-Form 60 and AFE-HFP, fumigants that have already been approved by the EPA. It is appropriate to apply these requirements to Tri-Form 80 because the three substances are similar and the use pattern is the same.

The risks of using Tri-Form 80 will be effectively managed

Tri-Form 80 is acutely toxic to humans and a suspected carcinogen. There is a potential risk of exposure to the operator, to other workers, and/or to bystanders if Tri-Form 80 is not handled correctly during application to soil, or if there is not adequate time allowed for the active ingredients to dissipate post-fumigation. Exposure can result in adverse effects such as permanent skin or eye damage, mutagenicity, and target organ toxicity.

Workers and others will be protected from exposure

The proposed requirements will protect workers and others from health risks by minimising the effects of release of Tri-Form 80 into the environment. This includes minimising the amount of substance released, and setting a buffer zone to exclude people not directly involved in fumigation from the area close to where Tri-Form 80 has been applied.

2. Amendments to the *Health and Safety at Work (Hazardous Substances – Additional Substances that Do Not Require Tracking) Safe Work Instrument 2018*

What is NPD 100 PLUS?	NPD 100 PLUS is an unleaded premixed fuel containing anti-knock additives. It is intended to be sold at retail fuel stations.
Classification	Class 3.1A
EPA status	Approved (August 2020)
HSNO approval number	HSR101436

Regulation 19.3 of the Regulations allows for a SWI to add a hazardous substance to Table 3 in Schedule 26.

What are we proposing?

WorkSafe proposes amending the [Health and Safety at Work \(Hazardous Substances – Additional Substances that Do Not Require Tracking\) Safe Work Instrument 2018](#) (the Substances Not Requiring Tracking SWI) to ensure that NPD 100 PLUS is able to be sold to the public.

We propose adding NPD 100 PLUS to table 3 in Schedule 26 of the Regulations, which lists substances that do not require tracking.

Why are we proposing this?

Part 19 of the Regulations covers the tracking of hazardous substances.

Tracking requires the PCBU to keep a record of where highly hazardous substances are from the time of manufacture or importation to their final use and/or disposal. Tracked substances must not be sold, transferred or delivered unless the supplier has written notification that there is a competent person who will take responsibility for the substance. These requirements are not reasonably practicable for retail fuel.

Class 3.1A substances – such as NPD 100 PLUS – are required to be tracked (see table 1, Schedule 26 of the Regulations). The tracking requirements effectively prevent these substances from being sold to the public. Adding NPD 100 PLUS to table 3 in Schedule 26 will allow the substance to be sold to the public.

NPD 100 PLUS is similar to other fuels listed in or added to Table 3

NPD 100 PLUS is similar to other fuels that are listed in table 3 or have been added to table 3 by the Substances Not Requiring Tracking SWI.

Managing and eliminating risks

Service station PCBUs are familiar with the measures required to manage the risks posed by fuels.

People using NPD 100 PLUS will not need to add or handle their own anti-knock additives, which can cause adverse health effects. An anti-knock additive is used to improve a fuel's octane rating, which suppresses the 'knocking' in the engine. Knocking, sometimes known as 'pinking', is when fuel is unable to burn in a stable way and detonates, causing the characteristic knocking sound and potentially damaging the engine.

3. Proposed SWI – Health and Safety at Work (Hazardous Substances – Additional Pesticides Subject to Transport Restrictions) Safe Work Instrument 2021

What are Hercon Vaportape II Insecticidal Strips?	Hercon Vaportape II Insecticidal Strips are a pesticide. The active ingredient is dichlorvos (also known as DDVP) which is gradually released over 8 to 12 weeks. It is intended to control Carpophilus beetles in commercial stone fruit and berry orchards.
Classification	6.1C inhalation
EPA status	Not yet approved
Provisional HSNO approval number	HSR101449

Regulation 13.15(2)(b) of the Regulations allows for a SWI to specify an additional class 6.1 pesticide for the purpose of regulation 13.15(1).

What are we proposing?

WorkSafe proposes a new SWI that adds Hercon Vaportape II Insecticidal Strips to the class 6.1 pesticides required to meet additional restrictions relating to transport.

In the Regulations:

- Regulation 13.15(1) states that class 6.1 pesticides must be contained in either a sealed unopened sachet or an airtight container during transport, to minimise the risk of vapour accumulating in the vehicle and causing harm
- Regulation 13.15(2) dictates which substances regulation 13.15(1) applies to – at the moment it only applies to a DDVP-impregnated device (HSNO approval number HSR000126).

We propose that the requirements in Regulation 13.15(1) should also apply to Hercon Vaportape II Insecticidal Strips.

Why are we proposing this?

Managing health and safety risks

Hercon Vaportape II Insecticidal Strips contain dichlorvos which is volatile, meaning that it can release harmful vapours.

Additional requirements are needed to manage risks to health and safety when Hercon Vaportape II Insecticidal Strips are being transported. Exposure through inhalation can occur if vapours accumulate in a vehicle when a worker is transporting the substance in open packages. The vapours can cause adverse health effects.

Isolating Hercon Vaportape II Insecticidal Strips in a sealed unopened sachet or an airtight container will ensure that no vapours escape from the packaging when it is being transported. This will prevent workers being exposed to the vapours.

Annex: Proposed requirements for Tri-Form 80

Part 14 of the Regulations places additional requirements that apply to specific fumigants. It also contains regulations that enable SWIs to be made applying the requirements to other fumigants approved by the EPA over time.

The proposed SWI requires the fumigant Tri-Form 80 to comply with requirements similar to those imposed on Tri-Form 60 by the [Health and Safety at Work \(Hazardous Substances - Requirements for Specified Fumigants\) Safe Work Instrument 2017](#) (the Specified Fumigants SWI) - see clauses 5 and 6 of that SWI.

The proposed requirements are outlined below. They will minimise risks to the health and safety of workers and others. See the draft SWI and the Regulations for further information.

Amendments to existing SWI

The amendments will require Tri-Form 80 to comply with the relevant provisions of the Regulations listed below.

REGULATION 14.4: ADDITIONAL FUMIGANTS UNDER PERSONAL CONTROL OF CERTIFIED HANDLER

Regulation 14.4(1)(c) of the Regulations allows a safe work instrument to specify another fumigant that must comply with regulation 14.4.

What will be required?

Regulation 14.4(2) will apply, requiring a PCBU with management or control of work using Tri-Form 80 to ensure that Tri-Form 80 is:

- a. under the personal control of a certified handler, or
- b. appropriately secured from access by persons other than a certified handler or a person who may handle the fumigant according to the conditions outlined in regulation 14.4(5), which are described further below.

Regulation 14.4(3) will apply, requiring the PCBU to ensure that no person other than a certified handler handles Tri-Form 80.

Regulation 14.4(4) will apply, meaning that the PCBU must ensure no person may slice or remove the plastic sheets used to cover soil treated with Tri-Form 80 within 14 days of the start of fumigation unless:

- that person is a certified handler, and
- at least one other person is present when the slicing or removal takes place.

Regulation 14.4(5) will apply, meaning that a person who is **not** a certified handler may handle Tri-Form 80, or slice or remove the plastic sheets used to cover the soil treated with Tri-Form 80, provided that a certified handler:

- is present at the place within the workplace where the person is handling Tri-Form 80, or slicing or removing the sheets (or both), and
- has provided guidance to the person about handling Tri-Form 80, or slicing or removing the sheets (or both), and
- is available at all times to assist the person, if necessary, at any time while they are handling Tri-Form 80, or slicing or removing the sheets (or both), and
- ensures that the person has successfully completed a training course specific to Tri-Form 80 before handling Tri-Form 80, or slicing or removing the sheets (or both).

Under regulation 14.4(5)(b), a person identified in regulation 4.4 of the Regulations as a person who does not require a compliance certificate as a certified handler, such as an inspector under HSWA or a member of the New Zealand Police, may also handle Tri-Form 80, or slice or remove the plastic sheets.

What are the reasons for these requirements?

This requirement ensures that only appropriately trained or supervised people handle Tri-Form 80 and slice or remove the plastic sheets covering soil treated with Tri-Form 80. This will help to ensure that the risks associated with Tri-Form 80 are understood and managed effectively.

The active ingredients continue to present a significant risk for up to 14 days after application.

REGULATION 14.20: SIZE OF APPLICATION BLOCK

Regulation 14.20(1)(c) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation. Regulation 14.20(2)(c) allows a safe work instrument to specify the maximum area of the application block.

The application block is an area within a defined boundary where Tri-Form 80 is applied to the soil in any 24-hour period. It includes any untreated areas within that boundary.

What will be required?

The maximum size of the application block will be 32 ha.

What is the reason for this requirement?

Limiting the size of the application block area reduces the likelihood that the public and workers who are not directly involved in fumigation will be exposed to Tri-Form 80. The greater the area, the more fumigant is released – and the more likely it is that people are exposed to it.

REGULATION 14.21: ENTRY RESTRICTION FOR APPLICATION BLOCK

Regulation 14.21(1)(c) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation.

What will be required?

A PCBU with management or control of fumigation using Tri-Form 80 must ensure that, from the start of the buffer zone period until the fumigation is complete, no person is in, or enters, an application block unless they meet certain requirements. The requirements include:

- being trained in the use of Tri-Form 80, and
- wearing appropriate PPE, and
- being there for one of the specific purposes outlined in Regulation 14.21, such as to handle Tri-Form 80, or to install, inspect, or repair the plastic sheeting used in the fumigation.

What are the reasons for these requirements?

Access to the application block is restricted because people can still be exposed to residual Tri-Form 80 during the buffer zone period. Exposure may result in adverse health effects.

REGULATION 14.22: PCBU TO SET BUFFER ZONES

Regulation 14.22(1)(c) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation. Regulation 14.22(8) allows a safe work instrument to specify the buffer zone size.

What will be required?

A PCBU with management or control of fumigation using Tri-Form 80 must set a buffer zone around the perimeter of the application block for each fumigation.

The buffer zone must not be less than 8m and must meet the relevant requirements outlined in regulation 14.22.

What is the reason for these requirements?

The purpose of the buffer zone is to exclude people not directly involved in fumigation from the area close to where Tri-Form 80 has been applied, so that they are not exposed to harmful levels of Tri-Form 80.

REGULATION 14.23: RESTRICTIONS ON APPLICATION OF FUMIGANT TO SOIL

Regulation 14.23(1)(c) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation.

What will be required?

A PCBU with management or control of fumigation using Tri-Form 80 must ensure it is not applied within 400 metres of a place within a workplace where the public is likely to be present and unable to readily evacuate, or in specified areas, buildings and locations in the buffer zone.

These areas, buildings and locations are listed in regulation 14.23(4) and include residential areas, publicly owned parks, and sheds and barns where people may be present during the buffer zone period.

What is the reason for these requirements?

Restricting the areas where Tri-Form 80 can be applied will protect the public and workers not directly involved in fumigation from exposure, which could result in adverse health effects.

REGULATION 14.24: ENTRY RESTRICTION FOR BUFFER ZONE

Regulation 14.24(1)(c) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation.

What will be required?

A PCBU with management or control of fumigation using Tri-Form 80 must, for the duration of the buffer zone period, ensure that the only people within the buffer zone are:

- people permitted to enter who meet specific requirements outlined in the Regulations and are wearing PPE, or
- people travelling through the buffer zone in vehicles (including bicycles) on roads, whose total transit time through that zone within any 24-hour period is less than 15 minutes.

What is the reason for these requirements?

Restricting entry to the buffer zone so that only certain people can enter, and setting total transit times, will limit exposure to Tri-Form 80, which could result in adverse health effects. Being exposed for 15 minutes or longer may cause adverse health effects.

REGULATION 14.26: MEASURES REQUIRED TO RESTRICT FUMIGANT EMISSION FROM TREATED SOIL

Regulation 14.26(1)(b) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation. Regulation 14.26(3) allows a safe work instrument to prescribe modified soil condition requirements.

What will be required?

A PCBU with management or control of fumigation using Tri-Form 80 must ensure at the beginning of the application that:

- a. the soil temperature at the depth of injection of Tri-Form 80 is a minimum of 5°C and does not exceed 27°C; and
- b. the moisture content of the soil is:
 - i. equal to or more than 70% when measured with a tensiometer, or
 - ii. between 50–75% as defined by the USDA Feel and Appearance method.

What is the reason for these requirements?

The soil temperature and moisture content are critical factors in managing the retention and release of chloropicrin from treated soil, so they must be within the ranges specified in the Regulations.

The soil condition requirements will be as modified for AFE-HFP; see the AFE-HFP section of this consultation document for more information.

REGULATION 14.27: SEALING SOIL AFTER FUMIGATION

Regulation 14.27(1)(b) of the Regulations allows a safe work instrument to specify another fumigant that must comply with this regulation.

What will be required?

Regulation 14.27 specifies how the soil must be sealed, compacted, or covered, depending on whether broadacre treatment or row treatment is being carried out, and whether plastic sheets are used.

For example, for broadacre treatment the PCBU must ensure that soil fumigated with Tri-Form 80 is sealed to prevent fumigant loss by using equipment that will uniformly mix the soil to a depth of 8 to 10 cm, and the soil surface must be compacted with a roller in combination with tillage equipment.

What are the reasons for these requirements?

Sealing, compacting or covering the soil after application of Tri-Form 80 slows down the release of fumigant gas from the soil. This minimises the potential for workers and others to be exposed to the gas which could cause adverse health effects.

Additional modifications for Tri-Form 80

In addition to the changes described above, two regulations need to be modified to align the requirements for Tri-Form 80 with the requirements for Tri-Form 60 and AFE-HFP.

These modifications are already specified for AFE-HFP in clauses 13 and 14 of the Specified Fumigants SWI. WorkSafe proposes that similar modifications are specified for Tri-Form 80 for the following regulations.

REGULATION 14.7: NOTIFICATION OF INTENDED FUMIGATION

Regulation 14.7(4) of the Regulations allows a safe work instrument to modify the notification requirements for a fumigant referred to in that safe work instrument.

What will be required?

The modified requirement specifies the people who must be notified about the intended fumigation, and when they must be notified (not less than 24 hours before the start of the fumigation).

What are the reasons for these requirements?

The proposed notification of intended fumigation requirement will ensure that everyone within 100m of the outer edge of the buffer zone is aware that fumigation using Tri-Form 80 will be carried out.

They will have adequate time to take appropriate steps to avoid exposure, which could result in adverse health effects.

REGULATION 14.10: PCBU MUST ERECT SIGNS

Regulation 14.10(4) of the Regulations allows a safe work instrument to prescribe modified signage requirements for a specified fumigant. The PCBU must ensure that the modified requirements are complied with.

What will be required?

Signs will be required at the perimeter of the buffer zone rather than the perimeter of the risk area.

The PCBU must place signs at the perimeter of the buffer zone that include certain details, such as a description of the general type of hazard associated with Tri-Form 80. The signs must be removed within 72 hours of the end of the buffer zone period.

What are the reasons for these requirements?

The purpose of putting up signs is to ensure that unprotected people do not enter the buffer zone and put themselves at risk. The Regulations do not have requirements for signage at the perimeter of the buffer zone, because some fumigants do not have buffer zone requirements.

Thank you for taking part in this consultation.

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