Actellic® Smoke
Generator No 20

L1110841 GBRI/10B

GROUP 1B INSECTICIDE

Smoke Generator containing 22.5% w/w pirimiphos-methyl.

A broad spectrum acaricide/insecticide for use in conjunction with a structural insecticide spray in empty grain stores for the control of rust-red flour beetle, saw-toothed grain beetle, grain weevil, flour moth and grain mite in cereal grains (wheat, barley, oats, triticale, millet, sorghum, buckwheat, maize rice and rye).

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

90g

Product registration number: MAPP 15739
UFI: YV10-00VM-200H-Y90J

Approval Holder
Octavius Hunt Limited
Redfield, Bristol, BS5 9NQ, UK
Tel: +44 (0) 117 955 5304

Marketing Company
Syngenta UK Limited
CPC4, Capital Park, Fulbourn,
Cambridge, CB21 5XE
Tel: Cambridge (01223) 883400

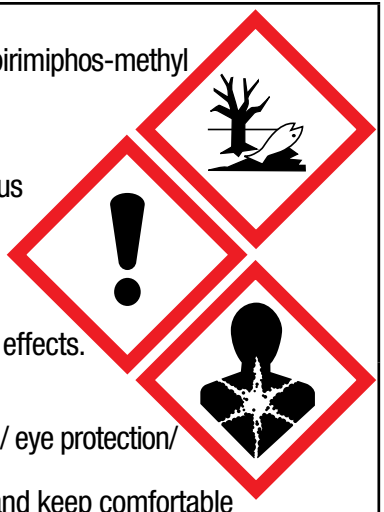
In case of toxic or transport emergency ring +44 (0) 1484 538444 (24h).

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

The Voluntary Initiative

STORE IN A COOL, DRY PLACE

ACTELLIC SMOKE GENERATOR NO. 20
Smoke generator containing 22.5% w/w pirimiphos-methyl
Danger
Harmful if inhaled.
Suspected of causing cancer.
Causes damage to organs (Central nervous system).
Causes damage to organs (Nervous system) through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.
Obtain special instructions before use.
Do not breathe dust.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF exposed or concerned: Call a POISON CENTER/ doctor.
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 15739. UFI: YV10-00VM-200H-Y90J

IMPORTANT INFORMATION

FOR USE ONLY AS AN ACARICIDE/INSECTICIDE IN FOOD STORAGE

Pirimiphos-methyl is an anticholinesterase organophosphorus compound. DO NOT USE if under medical advice NOT to work with such compounds.

For use in crop handling and storage structures
Maximum individual dose: One smoke generator per 570m3 of treated space.
Maximum number of treatments per batch of grain: 2 per storage area for stores which are intended to contain cereal grains (wheat, barley, oats, triticale, millet, sorghum, buckwheat, maize, rice and rye)

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.

SAFETY PRECAUTIONS

(a) Operator protection

Pirimiphos-methyl is an anticholinesterase organophosphorus compound. DO NOT USE if under medical advice NOT to work with such compounds.
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT† when igniting more than one smoke generator or in situations where it is not possible to vacate the treatment area immediately after ignition.
†Half mask to at least EN 140 fitted with a particulate filter to at least EN 143 P3, or equivalent.
However engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
DO NOT BREATHE SMOKE.
WASH HANDS AND EXPOSED SKIN before meals and after work.
UNPROTECTED PERSONS MUST BE KEPT OUT OF TREATED AREAS for at least four hours after treatment.
VENTILATE TREATED AREAS THOROUGHLY for at least half an hour before re-entry.
IF YOU FEEL UNWELL, seek medical advice (show label where possible).

(b) Environmental protection

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.
EXCLUDE WILDLIFE from buildings during treatment.

(c) Storage and disposal

KEEP CONTAINER WITH SEAL UNBROKEN locked up.
DISPOSE OF USED GENERATOR 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.

RESTRICTIONS

Avoid using smoke generators in windy weather.
A minimum of 20oC is required for best results.
This product is to be used only in accordance with the recommendations and instructions given on the labels provided with this pack. Use in any other circumstances is entirely at user's risk.

RESISTANCE

Actellic Smoke Generator No. 20 contains pirimiphos methyl which is classified by IRAC as an organophosphate insecticide.
Strains of saw-toothed grain beetle and flour mite resistant to organophosphorus insecticides are widespread and resistant strains of rust-red flour beetle have also been found. Where strains resistant to products containing organophosphorus compounds are present, ACTELLIC SMOKE GENERATOR NO. 20 is unlikely to give satisfactory control of these pests.

PESTS CONTROLLED

Pests in Storage Structures.
ACTELLIC SMOKE GENERATORS are not intended to be used alone. Their purpose is to improve the performance of insecticidal structural surface treatments. Where good cover from the sprayable treatment is not achieved control from the combined treatment is likely to be reduced. They work by causing agitation of insect and mite pests in inaccessible areas and encourages their movement into treated areas.
ACTELLIC SMOKE GENERATORS should only be used after an insecticidal spray treatment.

SPECIFIC INFORMATION

Timing

When to use: Grain storage premises should be disinfested in the late spring or early summer. In heavily infested premises, repeat six weeks later or just before harvest.

Rates of Use

Maximum individual dose – one generator per 570m3
Maximum number of treatments per batch of grain - 2 per storage area for stores which are intended to contain cereal grains (wheat, barley, oats, triticale, millet, sorghum, buckwheat, maize, rice and rye).

For stores which are intended to contain cereal grains treatment is one structural surface treatment of an authorised sprayable structural surface treatment combined with a maximum of two treatments of ACTELLIC SMOKE GENERATOR No. 20.

If a structure is used to store wheat, barley or oat grain treated by admixture before the store is subsequently used to store any other grain or seed, the structure should be cleaned thoroughly to avoid cross-contamination of the following stored crop.

Users are advised to consult the HGCA Grain storage guide for further advice on good storage hygiene.

APPLICATION

Pre-treatment

The use of ACTELLIC SMOKE GENERATORS should always be preceded by thorough cleaning of the grain store by sweeping or by the use of an industrial vacuum cleaner. Burn all sweepings. Spray all surfaces within the store including floor, roof, insides and outsides of storage bins with a structural insecticide spray. Also spray conveyors, elevators and other handling equipment before using the smoke generator.

Igniting the generator

Evacuate all people and livestock and close all ventilators, windows and doors (except exit door) before treatment. Block all known leakages. If more than one generator is required, distribute them evenly on the floor before lighting. Shake each generator sufficiently to loosen the contents before opening. Remove the lid and light the exposed tip of the fuse with a match or lighter. Do not remove the fuse igniter. The fuse will smoulder and take about 20 seconds to light the generator. Complete ignition rapidly working towards the exit. When igniting more than one generator or in situations where it is not possible to vacate the treatment area immediately after ignition, wear suitable protective clothing (coveralls) and suitable respiratory equipment (half mask to at least EN 140 fitted with a particulate filter to at least EN 143 P3, or equivalent). Leave the store closed for 24 hours and ensure that the doors are locked and suitable warning notices displayed. Ventilate thoroughly for at least one hour before working in the store. Do not re-enter the store within 3 hours of ignition unless wearing a suitable respirator.

MEDICAL ADVICE

SYMPTOMS OF POISONING

These may include excessive sweating, headache, weakness, faintness and giddiness, nausea, stomach pains, vomiting, small pupils, blurred vision and muscle twitching.

FIRST AID

If any of the above symptoms occur, particularly if there is known contamination,
STOP WORK
Remove contaminated clothing. Wash exposed skin and hair.
Prevent all exertion
Call a doctor AT ONCE and show him the label.

GUIDE TO DOCTOR

This product contains and anticholinesterase organophosphorus compound.

Specific treatment

1. IN ALL CASES AND AS EARLY AS POSSIBLE inject atrophine sulphate 2mg or pro-rata for children and repeat (if necessary) until fully atropinised.
2. IF AVAILABLE administer pralidoxim 1 gramme by intra-muscular injection. Repeat after 3-4 hours.

Other measures

Keep airway clear
Watch respiration – intubation with endotracheal tube, or tracheotomy may be necessary in conjunction with artificial ventilation.
Put patient at complete rest in hospital for 24 hours at least.

Confirmation of diagnosis

By estimating cholinesterase activity (5ml blood, unhaemolysed, collected in an anti-coagulant).

Further advice from:
Syngenta Crop Protection UK Ltd
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
(01223) 883400

IN A TOXIC EMERGENCY CALL +44 (0) 1484 538444 (24h).

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

(This section does not form part of the product label under the Control of Pesticides Regulations 1986.)

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 'off-label' approval or is otherwise permitted under the Control of Pesticides Regulations.

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

SAFETY DATA SHEET - V3.0

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade name : ACTELLIC SMOKE GEN N:20
Design code : A13668A
Product Registration Number: MAPP 15739
Unique Formula Identifier(UFI): YV10-00VM-200H-Y90J

1.2 Relevant Identified Uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Smoke generator
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:
product.technical_enquiries@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

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

Acute toxicity, Category 4 - H332: Harmful if inhaled.

Carcinogenicity, Category 2 - H351: Suspected of causing cancer.

Specific target organ toxicity - single exposure, Category 1, Central nervous system - H370: Causes damage to organs.

Specific target organ toxicity - repeated exposure, Category 1, Nervous system - H372: Causes damage to organs through prolonged or repeated exposure.

Short-term (acute) aquatic hazard, Category 1 - H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Category 1 - H410: Very toxic to aquatic life with long lasting effects.

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	Danger	
Hazard Statements	H332	Harmful if inhaled.
	H351	Suspected of causing cancer.
	H370	Causes damage to organs (Central nervous system).
	H372	Causes damage to organs (Nervous system) through prolonged or repeated exposure.
	H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements	P201	Obtain special instructions before use.
	P260	Do not breathe dust.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
	P304+P340 +P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
	P308+P311	IF exposed or concerned: Call a POISON CENTER/ doctor.
	P501	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.

Hazardous components which must be listed on the label:
pirimiphos-methyl (ISO)
potassium chlorate
4-methylpentan-2-one

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, bioaccumula-tive and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

This product contains an anticholinesterase compound. Do not use if under medical advice not to work with such compounds.

May form combustible dust concentrations in air.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Components

Chemical Name	CAS-No. EC-No. Index-No. Reg. number	Classification	Concentration (%w/w)
pirimiphos-methyl (ISO)	29232-93-7 249-528-5 015-134-00-5	Acute Tox. 4; H302 STOT SE 1; H370 (Central nervous system)	>= 20 - < 25
pirimiphos-methyl (ISO)	29232-93-7 249-528-5 015-134-00-5	STOT RE 1; H372 (Nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1,000 M-Factor (Chronic aquatic toxicity): 1,000	>= 20 - < 25
potassium chlorate	3811-04-9 223-289-7 017-004-00-3	Ox. Sol. 1; H271 Acute Tox. 4; H302 Acute Tox. 4; H332 Aquatic Chronic 2; H411	>= 20 - < 25
4-methylpentan-2-one	108-10-1 203-550-1 606-004-00-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT SE 3; H336 (Central nervous system)	>= 1 - < 10
Substances with a workplace exposure limit :			
kaolin	1332-58-7 296-473-8		>= 30 - < 50

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: Poisoning produces effects associated with anticholinesterase activity which may include: Nausea, Diarrhoea, Vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Consider taking venous blood for determination of blood cholinesterase activity (use heparin tube) Administer atropine sulphate as antidote. Specific antidotes are oximes (e.g. Pralidoxime) or Toxogonin.

SECTION 5. FIRE-FIGHTING 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: Use 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 fire-fighting: 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. May cause or intensify fire; oxidizer.

5.3 Advice for fire-fighters
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
Refer to protective measures listed in sections 7 and 8. Avoid dust formation.
6.2 Environmental precautions
Environmental precautions: Prevent further leakage or spillage if safe to do so. 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, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
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 character-istics 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 well- ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

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
kaolin	1332-58-7	TWA (Respirable dust)	2 mg/m^3	GB EH40

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes.			

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
	The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable dust)	0.1 mg/m^3	2004/37/EC
Further information	Carcinogens or mutagens			

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
pirimiphos-methyl (ISO)	29232-93-7	TWA	3 mg/m^3 (Skin)	Syngenta
4-methylpentan-2-one	108-10-1	TWA	20 ppm 208 mg/m^3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm 416 mg/m^3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	20 ppm 83 mg/m^3	2000/39/EC
Further information	Indicative			
		STEL	50 ppm 208 mg/m^3	2000/39/EC
Further information	Indicative			

Biological occupational Exposure Limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
4-methyl-pentan-2-one	108-10-1	4-methylpentan-2-one 108-10-1 4-methylpen-tan-2- one: 20 micromol per litre (Urine)	After shift	GB EH40 BAT

Derived No Effect Level (DNEL):

Substance name	End use	Exposure routes	Potential health effects	Value
pirimiphos-methyl (ISO)	Workers	Inhalation	Long-term systemic effects	0.027 mg/m^3
	Workers	Dermal	Long-term systemic effects	0.046 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.005 mg/m^3
	Consumers	Dermal	Long-term systemic effects	0.017 mg/kg
	Consumers	Oral	Long-term systemic effects	0.002 mg/kg
potassium chlorate	Workers	Dermal	Long-term systemic effects	5 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	0.7 mg/m^3
	Consumers	Oral	Long-term systemic effects	0.05 mg/kg bw/day
silane, dichlorodime-thyl-, reaction products with silica		Inhalation		4 mg/m^3
4-methylpen-tan-2-one	Workers	Inhalation	Long-term systemic effects	83 mg/m^3
	Workers	Inhalation	Acute systemic effects	208 mg/m^3
	Workers	Inhalation	Long-term local effects	83 mg/m^3
	Workers	Inhalation	Acute local effects	208 mg/m^3
	Workers	Dermal	Long-term systemic effects	11.8 mg/kg

Substance name	End use	Exposure routes	Potential health effects	Value
	Consumers	Inhalation	Long-term systemic effects	14.7 mg/m^3
	Consumers	Inhalation	Acute systemic effects	155.2 mg/m^3
	Consumers	Inhalation	Long-term local effects	14.7 mg/m^3
	Consumers	Inhalation	Acute local effects	155.2 mg/m^3
	Consumers	Dermal	Long-term systemic effects	4.2 mg/kg
	Consumers	Oral	Long-term systemic effects	4.2 mg/kg

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
pirimiphos-methyl (ISO)	Fresh water	0 mg/l
	Marine water	0 mg/l
	Sewage treatment plant	4.5 mg/l
	Fresh water sediment	0.001 mg/kg
	Marine sediment	0 mg/kg
	Soil	0.419 mg/kg
	Secondary poisoning	1.33 mg/kg
potassium chlorate	Fresh water	1.15 mg/l
	Marine water	1.15 mg/l
	Sewage treatment plant	115 mg/l
	Marine sediment	4.14 mg/kg dry weight (d.w.)
	Fresh water sediment	4.14 mg/kg dry weight (d.w.)
	Soil	3.83 mg/kg dry weight (d.w.)
4-methylpentan-2-one	Fresh water	0.6 mg/l
	Marine water	0.06 mg/l
	Fresh water - intermittent	1.5 mg/l
	Sewage treatment plant	27.5 mg/l
	Fresh water sediment	8.27 mg/kg
	Marine sediment	0.83 mg/kg
	Soil	1.3 mg/kg

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

Material: Nitrile rubber

Break through time: > 480 min

Glove length: 0.5 mm

Remarks: Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Dust impervious protective suit.

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Respirator with a half face mask. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when han dling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

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: off-white

Odour: characteristic

Odour Threshold: No data available

pH: No data available
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): No data available
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Vapour pressure: No data available
Relative vapour density: No data available
Density: 1 g/cm3
Bulk density: approximately 940 kg/m3
Water solubility: slightly soluble
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Explosive properties: Not explosive
Oxidizing properties: The substance or mixture is not classified as oxidizing

9.2 Other information
Minimum ignition temperature: 475 °C
Minimum ignition energy: > 500 mJ
Particle size: No data available

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: Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method
Acute inhalation toxicity: LC50 (Rat, female): 3.22 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Components:

pirimiphos-methyl (ISO):

Acute oral toxicity : LD50 (Rat, male and female): 1,414 mg/kg
Acute toxicity estimate: 1,414 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
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): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

potassium chlorate:

Acute oral toxicity:Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity: Assessment: The component/mixture is moderately toxic after short term inhalation.

4-methylpentan-2-one:

Acute oral toxicity: LD50 (Rat): 2,080 mg/kg
Method: OECD Test Guideline 401
Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

Skin corrosion/irritation

Components:

pirimiphos-methyl (ISO):

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Components:

pirimiphos-methyl (ISO):

Species : Rabbit

Result : No eye irritation

4-methylpentan-2-one:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Components:

pirimiphos-methyl (ISO):

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

pirimiphos-methyl (ISO):

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

Carcinogenicity

Components:

pirimiphos-methyl (ISO):

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

4-methylpentan-2-one:

Carcinogenicity - Assessment: Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Components:

pirimiphos-methyl (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - single exposure

Components:

pirimiphos-methyl (ISO):

Target Organs : Central nervous system

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

4-methylpentan-2-one:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

Components:

pirimiphos-methyl (ISO):

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Components:

pirimiphos-methyl (ISO):

Toxicity to fish: LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.404 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): 0.000314 mg/l
Exposure time: 48 h
Toxicity to algae/aquatic plants: ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 3.38 mg/l
Exposure time: 72 h
NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 0.3 mg/l
End point: Growth rate
Exposure time: 72 h
M-Factor (Acute aquatic toxicity): 1,000
Toxicity to microorganisms: IC50 (*Pseudomonas putida*): > 4.5 mg/l
Exposure time: 6 h
Toxicity to fish (Chronic toxicity): NOEC: < 0.025 mg/l
Exposure time: 28 d
Species: *Oncorhynchus mykiss* (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC: 0.00005 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
M-Factor (Chronic aquatic toxicity): 1,000

potassium chlorate:

Ecotoxicology Assessment

Chronic aquatic toxicity: Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Components:

pirimiphos-methyl (ISO):

Stability in water : Degradation half life: 4 - 6 d
Remarks: Product is not persistent.

12.3 Bioaccumulative potential

Components:

pirimiphos-methyl (ISO):

Bioaccumulation : Remarks: High bioaccumulation potential.
Partition coefficient: n- octanol/water: Pow: 3.9 (20 °C) - pH: 4
Pow: 4.2 (20 °C) - pH: 5 - 7

12.4 Mobility in soil

Components:

pirimiphos-methyl (ISO):

Distribution among environmental compartments : Remarks: Low mobility in soil.
Stability in soil : Dissipation time: 8.3 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

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:

pirimiphos-methyl (ISO):

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

4-methylpentan-2-one:

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 for local recycling or waste disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

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

14.2 UN proper shipping name

ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PIRIMIPHOS-METHYL)
RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PIRIMIPHOS-METHYL)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PIRIMIPHOS-METHYL)
IATA: Environmentally hazardous substance, solid, n.o.s. (PIRIMIPHOS-METHYL)

14.3 Transport hazard class(es)

ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR

Packing group: III
Classification Code: M7
Hazard Identification Number: 90
Labels: 9
Tunnel restriction code: (-)

RID

Packing group: III
Classification Code: M7
Hazard Identification Number: 90
Labels: 9

IMDG

Packing group: III
Labels: 9
EmS Code: F-A, S-F

IATA (Cargo)
Packing instruction (cargo aircraft): 956
Packing instruction (LQ): Y956
Packing group: III
Labels: Miscellaneous
IATA (Passenger)
Packing instruction (passenger aircraft): 956
Packing instruction (LQ): Y956
Packing group: III
Labels: Miscellaneous
Remarks: This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

14.5 Environmental hazards

ADR
Environmentally hazardous : yes
RID
Environmentally hazardous : yes
IMDG
Marine pollutant : yes
IATA (Passenger)
Environmentally hazardous: yes
IATA (Cargo)
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 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

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

Relevant EU provisions transposed through retained EU law
UK REACH List of restrictions (Annex 17): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: 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: potassium chlorate
Control of Major Accident Hazards Regulations 2015 (COMAH)
H3 STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE
E1 ENVIRONMENTAL HAZARDS

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

H225 Highly flammable liquid and vapour.
H271 May cause fire or explosion; strong oxidizer.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Carc. : Carcinogenicity
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Ox. Sol.: Oxidizing solids
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

2004/37/EC: Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT : UK. Biological monitoring guidance values
Syngenta: Syngenta Occupational Exposure Limit
2000/39/EC / TWA : Limit Value - eight hours
2000/39/EC / STEL : Short term exposure limit
2004/37/EC / TWA: Long term exposure limit
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)
Syngenta / TWA: Time weighted average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; 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; KECI - 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H332	Based on product data or assessment
Carc. 2	H351	Calculation method
STOT SE 1	H370	Calculation method
STOT RE 1	H372	Calculation method
Aquatic Acute 1	H400	Calculation method
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.

Actellic® Smoke
Generator No 20

L1110841 GBRI/10B

GROUP 1B INSECTICIDE

Smoke Generator containing 22.5% w/w pirimiphos-methyl.

A broad spectrum acaricide/insecticide for use in conjunction with a structural insecticide spray in empty grain stores for the control of rust-red flour beetle, saw-toothed grain beetle, grain weevil, flour moth and grain mite in cereal grains (wheat, barley, oats, triticale, millet, sorghum, buckwheat, maize rice and rye).

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

90g

Product registration number: MAPP 15739
UFI: YV10-00VM-200H-Y90J

Approval Holder
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Tel: +44 (0) 117 955 5304

Marketing Company
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CPC4, Capital Park, Fulbourn,
Cambridge, CB21 5XE
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In case of toxic or transport emergency ring +44 (0) 1484 538444 (24h).

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

The Voluntary Initiative

STORE IN A COOL, DRY PLACE

ACTELLIC SMOKE GENERATOR NO. 20
Smoke generator containing 22.5% w/w pirimiphos-methyl
Danger
Harmful if inhaled.
Suspected of causing cancer.
Causes damage to organs (Central nervous system).
Causes damage to organs (Nervous system) through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.
Obtain special instructions before use.
Do not breathe dust.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF exposed or concerned: Call a POISON CENTER/ doctor.
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 15739. UFI: YV10-00VM-200H-Y90J