



Actellic® 50EC

syngenta.

GROUP 1B INSECTICIDE



Product registration number: MAPP 19325 UFI: 1P3P-N2SM-G007-EWTU

ACTELLIC® 50EC is an emulsifiable concentrate formulation containing 500 g/litre (49.02% w/w) pirimiphos-methyl.

A broad spectrum insecticide for use on stored grain.

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

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In case of toxic or transport emergency ring +44 (0)1484 538444 any time

PROTECT FROM FROST

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

1 Litre

L1088091 GBRI/04A PPE 4159839

ACTELLIC® 50EC

An emulsifiable concentrate formulation containing 500 g/litre (49.02% w/w) pirimiphos-methyl.

Danger

Flammable liquid and vapour.

Harmful if swallowed.

May be fatal if swallowed and enters airways.

May cause an allergic skin reaction.

Causes serious eye damage.

May cause respiratory irritation.

May cause drowsiness or dizziness.

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.

Keep out of reach of children.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. – No smoking.

Do not breathe mist or vapours.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF EXPOSED OR CONCERNED: Call a POISON CENTER/doctor.

Do NOT induce vomiting.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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.

Repeated exposure may cause skin dryness or cracking.

MAPP: 19325 UFI: 1P3P-N2SM-G007-EWTU



IMPORTANT INFORMATION

FOR USE ONLY AS AN INSECTICIDE IN FOOD STORAGE PRACTICE

Crops/ situations	Maximum individual dose	Maximum Number of Treatments	Other specific restrictions
Admixture: stored wheat, triticale, barley and oats.	8 ml product/tonne grain.	One per batch of grain.	The maximum concentration must not exceed 8 ml product / 0.75 litres water.

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.

L1088091 GBRI/04A PPE 4159839

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.

Application as a grain admixture must only be made using automated application equipment.

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

Operators must wear suitable protective gloves and face protection (faceshield) when handling the concentrate. However, other engineering controls in addition to those specified above may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

WASH SPLASHES OF CONCENTRATE from skin or eyes immediately.

ENSURE ADEQUATE VENTILATION IN CONFINED SPACES.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before meals and after work.

TAKE OFF immediately all contaminated clothing.

COVER WATER STORAGE TANKS before application.

VENTILATE CONFINED SPACES THOROUGHLY.

IF SWALLOWED, do not induce vomiting: seek medical advice immediately and show this container or label.

DO NOT HANDLE grain unnecessarily

(b) Environmental protection

DO NOT CONTAMINATE SURFACE WATER OR DITCHES with chemical or used container.

Wildlife must be excluded from buildings during treatment.

(c) Storage and disposal

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

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

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.

RESISTANCE MANAGEMENT

Pirimiphos-methyl is an acetylcholinesterase organophosphate (IRAC 1B). Strains of saw-toothed grain beetle and the flour mite resistant to organophosphorus compounds are widespread and resistant strains of red-rust flour beetles have also been found. Where strains resistant to organophosphorus compounds are present ACTELLIC 50EC is unlikely to give satisfactory control of these pests. ACTELLIC 50EC should be used in alternation with products from differing mode of action groups where possible, and as part of an integrated pest management programme (see HGCA cereal guide for further information).

PESTS CONTROLLED

ACTELLIC 50EC controls the following pests of stored grain:

Saw-toothed grain beetle (*Oryzaephilus surinamensis*), Grain weevil (*Sitophilus granarius*), Common flour mite (*Acarus siro*), Warehouse moth (*Ephestia elutella*), Flour or Mill moth (*Ephestia kuhniella*), Flour beetles (*Tribolium* spp.), Rust-red grain beetle (*Cryptolestes ferrugineus*) and Cosmopolitan food mite (*Glycyphagus destructor*).

COMPLETE ADMIXTURE - Wheat, triticale, barley, oats

Preparation

For best results the store should be thoroughly cleaned before the grain is added.

Timing

Grain should be treated as soon as possible during storage. Ideally ACTELLIC 50EC should be applied to the grain as it is loaded into store. However, moist and/or warm grain should be dried and/or cooled before treatment. Vigorous drying and cooling operations can reduce the effectiveness of treatment by causing degradation of the insecticide. Whenever such operations are necessary for grain going into longer term storage they should be conducted prior to treatment, ideally before the grain is loaded into its final storage place. Treatment of grain to be used for seed purposes is inadvisable due to adverse effects on subsequent seedlings.

Moisture content

For best results when using ACTELLIC 50EC moisture contents should be maintained at or below 15% for cereals. If the moisture content is higher the effectiveness of treatment and the period of protection can be reduced.

Curative treatment

Always inspect grain following application to ensure that control is complete.

SURFACE ADMIXTURE - Wheat, triticale, barley, oats

Preparation

Surface admixture will be effective only if the store is thoroughly cleaned and disinfested, and if the grain coming into store is free of insect or mite pests.

Treatment

Treat the surface layer of the grain bulk to a depth of at least 30-100cm. This can be done by first part filling the store and levelling the bulk of untreated grain. Treat the remaining grain as it enters the store, distribute evenly over the bulk to create a treated layer.

Storage conditions

Care should be taken to ensure that the moisture content of the grain is kept low (at or below 15% for cereals), and that the bulk is kept cool. Any subsequent movement of the surface layer will reduce the effectiveness of treatment.

Surface admixture of ACTELLIC 50EC is compatible with 'Integrated Pest Control' (IPC). Further details are available from specialist advisers or your local Syngenta adviser.

Important note

Surface admixture is recommended for use only where the above preparation, treatment and storage conditions can be achieved. The use of surface admixture under any other circumstances is at user's own risk.

Use	Instructions
Complete or Surface Admixture	Ensure good spray coverage of the grain or seed. Adjust the conveyor to produce a shallow, even flow of grain or seed at the point of application. Poor or uneven coverage may reduce the level of control. Establish the grain or seed carrying rate of the conveyor and ensure accurate calibration of application equipment. See above for additional information.
Use	Instructions
Wheat, triticale, barley and oats: including barley for malting, and milling wheat	<u>For a conveyor rate of 22.5-45 tonnes per hour:</u> Apply 8 ml product in 0.75 litres of water per tonne through a, medium/coarse type nozzle. <u>For a conveyor rate of below 22.5 tonnes per hour:</u> Apply 8 ml product in 1.5 litres of water per tonne. This can be achieved using an orifice plate (e.g. 'Teejet' orifice plate 4916 series).

Wheat, triticale, barley and oats

Maximum individual dose: 8 ml product/tonne grain.

Maximum number of treatments: One per batch of grain.

Other specific restrictions: The maximum concentration must not exceed 8ml product / 0.75 litres water.

Important Note

Where grain has been treated by admixture, it must be labelled as follows: "THIS GRAIN HAS BEEN CHEMICALLY TREATED".

MIXING INSTRUCTIONS

Shake well before use. Half fill the spray tank with water and begin agitation. Add the required quantity of ACTELLIC 50EC to the spray tank and complete filling. Maintain agitation during application and apply immediately.

Application

Apply using a suitable liquid applicator. DO NOT APPLY surface admixture or complete admixture using hand held equipment. Follow the manufacturer's instructions and take care to minimise the risk of operator exposure. Consult your supplier or Syngenta UK Ltd for a list of application equipment suppliers.

After Use

Empty application equipment and clean thoroughly after use.

Part used containers must be securely sealed and stored away from food, drink and animal feeding stuffs.

Do not re-use the container for any purpose.

Notes

- For best results when using ACTELLIC 50EC moisture contents should be maintained at or below 15% for cereals. If the moisture content is higher the effectiveness of treatment and the period of protection can be reduced.
- Insecticide treatments tend to work more slowly, and be less effective in cold conditions.
- Moist grain coming into store should be dried and cooled before treatment with ACTELLIC 50EC. Drying and cooling operations made after treatment can reduce the effectiveness of treatment.

- Predatory mites (*Cheyletus*) are sometimes found in grain feeding on infestations of grain mites. They are not a pest species and do not harm grain, but their presence can cause rejection by buyers. Predatory mites can survive treatments of organophosphorus insecticides (e.g. ACTELLIC 50EC) and are sometimes found after curative treatments to control heavy mite infestations. They will not remain for long after their food source has been removed, but grain should be inspected carefully before selling.

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.

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

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

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'extensions of use' 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 - V1.0

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

1.1 Product Identifier

Trade name : ACTELLIC 50EC

Design code : A5832C

Product Registration Number : MAPP 19325

Unique Formula Identifier (UFI): 1P3P-N2SM-G007-EWTU

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

Use of the Substance/Mixture: Insecticide

Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Limited, CPC4, Capital Park Fulbourn, Cambridge, CB21 5XE, United Kingdom

Telephone: +44 (0) 1223 883400

Telefax: +44 (0) 1223 882195

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

1.4 Emergency telephone number

Emergency telephone number: +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Flammable liquids, Category 3 - H226: Flammable liquid and vapour.

Acute toxicity, Category 4 - H302: Harmful if swallowed.
 Serious eye damage, Category 1 - H318: Causes serious eye damage.
 Skin sensitisation, Category 1 - H317: May cause an allergic skin reaction.
 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 - single exposure, Category 3, Respiratory system - H335: May cause respiratory irritation.
 Specific target organ toxicity - single exposure, Category 3, Central nervous system - H336: May cause drowsiness or dizziness.
 Specific target organ toxicity - repeated exposure, Category 1, Nervous system - H372: Causes damage to organs through prolonged or repeated exposure.
 Aspiration hazard, Category 1 - H304: May be fatal if swallowed and enters airways.
 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	H226	Flammable liquid and vapour.
	H302	Harmful if swallowed.
	H304	May be fatal if swallowed and enters airways.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H335	May cause respiratory irritation.
	H336	May cause drowsiness or dizziness.
	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.
Supplemental Hazard Statements	H410	Very toxic to aquatic life with long lasting effects.
	EUH066	Repeated exposure may cause skin dryness or cracking.
Precautionary Statements	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Precautionary Statements	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
	P305+P351	IF IN EYES: Rinse cautiously with water for several minutes.
	+P338+P310	Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
	P308+P331	IF exposed or concerned: Call a POISON CENTER/doctor.
	P331	Do NOT induce vomiting.
	P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391	Collect spillage.	
P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.	

Hazardous components which must be listed on the label:

pirimiphos-methyl (ISO); Hydrocarbons, C9, Aromatics; calcium dodecylbenzenesulphonate; 4-methylpentan-2-one

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. This product contains an anticholinesterase compound. Do not use if under medical advice not to work with such compounds.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures Components

Chemical Name	CAS-No. EC-No. Index-No. Registration 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) 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	>= 30 - < 50
Hydrocarbons, C9, Aromatics	128601-23-0 265-199-0 01-2119455851-35	Flam. Liq. 3; H226 STOT SE 3; H335 (Respiratory system) STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 30 - < 50

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (%w/w)
calcium dodecylbenzenesulphonate	26264-06-2 247-557-8	Skin Irrit.2; H315 Eye Dam.1; H318 Aquatic Chronic 3; H412	>= 3 - < 10
4-methylpentan-2-one	108-10-1 203-550-1 606-004-00-4 01-2119473980-30	Flam. Liq. 2; H225 Acute Tox. 4; H332 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system) EUH066	>= 1 - < 10
2-methylpropan-1-ol	78-83-1 201-148-0 603-108-00-1 01-2119484609-23	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system)	>= 1 - < 3

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. Aspiration may cause pulmonary oedema and pneumonitis.

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.

Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

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. Flash back possible over considerable distance.

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

Personal precautions: Refer to protective measures listed in sections 7 and 8. Keep people away from and upwind of spill/leak. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Remove all sources of ignition. Pay attention to flashback.

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: No special protective measures against fire required. 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 combustible material. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feedingstuffs. No smoking. Further information on storage stability : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

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

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
pirimiphos-methyl (ISO)	29232-93-7	TWA	3 mg/m ³ (Skin)	Syngenta
Hydrocarbons, C9, Aromatics	128601-23-0	TWA	19 ppm 100 mg/m ³	Supplier
4-methylpentan-2- one	108-10-1	TWA	50 ppm 208 mg/m ³	GB EH40
Further information	Can be absorbed through the 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 the 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			
2-methylpropan-1- o	78-83-1	TWA	50 ppm 154 mg/m ³	GB EH40
		STEL	75 ppm 231 mg/m ³	GB EH40

Biological occupational Exposure Limits

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

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End use	Exposure routes	Potential health effects	Value
calcium dodecylbenzenesulphonate	Workers	Dermal	Long-term systemic effects	1.7 mg/kg
	Consumers	Dermal	Acute systemic effects	85 mg/kg
	Consumers	Oral	Long-term systemic effects	89 mg/kg
2-methylpropan-1-ol	Workers	Inhalation	Long-term systemic effects, Long-term local effects	310 mg/m ³
	Consumers	Inhalation	Long-term systemic effects, Long-term local effects	55 mg/m ³
	Consumers	Oral	Long-term systemic effects, Long-term local effects	25 mg/kg

Substance name	End use	Exposure routes	Potential health effects	Value	
Hydrocarbons, C9, Aromatics	Workers	Inhalation	Long-term systemic effects	150 mg/m ³	
	Workers	Dermal	Long-term systemic effects	25 mg/kg	
	Workers	Inhalation	Long-term systemic effects	32 mg/kg	
	Workers	Dermal	Long-term systemic effects	11 mg/kg	
	Workers	Oral	Long-term systemic effects	11 mg/kg	
4-methylpentan-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	
	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	
castor oil, ethoxylated	Workers	Inhalation	Long-term systemic effects	16.4 mg/m ³	
	Workers	Dermal	Long-term systemic effects	4.67 mg/kg bw/day	
		Consumers	Inhalation	Long-term systemic effects	2.9 mg/m ³
		Consumers	Dermal	Long-term systemic effects	1.67 mg/kg bw/day
		Consumers	Oral	Long-term systemic effects	1.67 mg/kg bw/day

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
castor oil, ethoxylated	Fresh water sediment	0.0129 mg/kg dry weight (d.w.)
	Marine sediment	0.0129 mg/kg dry weight (d.w.)
	Soil	0.00258 mg/kg dry weight (d.w.)
calcium dodecylbenzenesulphonate	Fresh water	0.023 mg/l
	Marine water	0.0023 mg/l
	Intermittent use/release	0.01 mg/l
	Fresh water sediment	0.174 mg/kg
	Marine sediment	0.0174 mg/kg
2-methylpropan-1-ol	Sewage treatment plant	3 mg/kg
	Soil	0.62 mg/kg
	Fresh water	0.4 mg/l
	Sewage treatment plant	10 mg/l
	Soil	0.0699 mg/kg

Substance name	Environmental Compartment	Value
	Marine sediment	0.152 mg/kg
	Fresh water sediment	1.52 mg/kg
	Marine water	0.04 mg/l
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: Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded. Tightly fitting safety goggles. Face-shield.

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: Impervious clothing

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Respirator with combination filter for vapour/particulate (EN 141) The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling 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:	Liquid, clear
Colour:	Light yellow to brown
Odour:	Aromatic
Odour Threshold:	No data available
pH:	4 - 8. Concentration: 1% w/v
Melting point/range:	No data available
Boiling point/boiling range:	No data available
Flash point:	46 °C. Method: Pensky-Martens closed cup
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Lower explosion limit:	No data available
Upper explosion limit:	No data available
Vapour pressure:	No data available
Relative vapour density:	No data available
Density:	1.02 g/cm ³ (25 °C)
Solubility in other solvents:	Miscible. Solvent: water
Partition Coefficient n-octanol/water:	No data available
Autoignition temperature:	410 °C
Decomposition temperature:	No data available
Viscosity, dynamic:	4.61 mPa.s (40 °C) 8.08 mPa.s (20 °C)
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing.

9.2 Other Information

Surface tension:	35.3 mN/m, 25 °C
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 : LD50 (Rat, female): 300 - 2,000 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

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

Hydrocarbons, C9, Aromatics:

Acute inhalation toxicity : LD50 (Rat, female): 3,492 mg/kg

4-methylpentan-2-one:

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

2-methylpropan-1-ol:

Acute oral toxicity : LD50 (Rat): 2,830 - 3,350 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 24.6 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 - 2,460 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit
Assessment : Repeated exposure does not cause skin dryness or cracking.
Result : No skin irritation

Components:

pirimiphos-methyl (ISO):

Species : Rabbit
Result : No skin irritation

Hydrocarbons, C9, Aromatics:

Result : Repeated exposure may cause skin dryness or cracking.
Species : Rabbit
Result : Mild skin irritation

calcium dodecylbenzenesulphonate:

Result : Irritating to skin.

2-methylpropan-1-ol:

Result : Irritating to skin.

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : Risk of serious damage to eyes.

Components:

pirimiphos-methyl (ISO):

Species : Rabbit
Result : No eye irritation

calcium dodecylbenzenesulphonate:

Result : Irreversible effects on the eye

4-methylpentan-2-one:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

2-methylpropan-1-ol:

Result : Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Test Type : Buehler Test
Species : Guinea pig
Result : May cause sensitisation by skin contact.

Components:

pirimiphos-methyl (ISO):

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

2-methylpropan-1-ol:

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.
Remarks : Information given is based on data obtained from similar substances.

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.

Hydrocarbons, C9, Aromatics:

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

4-methylpentan-2-one:

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

2-methylpropan-1-ol:

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

STOT - repeated exposure

Components:

pirimiphos-methyl (ISO):

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

Aspiration toxicity

Components:

Hydrocarbons, C9, Aromatics:

May be harmful if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish : LC50 (*Cyprinus carpio* (Carp)): 6.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates :

EC50 (*Daphnia magna* (Water flea)): 0.00048 mg/l
Exposure time: 48 h

Toxicity to algae :

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 8.27 mg/l
Exposure time: 72 h
NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 0.22 mg/l
End point: Growth rate
Exposure time: 72 h

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 :

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

Hydrocarbons, C9, Aromatics:

Toxicity to fish :

LL50 (*Oncorhynchus mykiss* (rainbow trout)): 9.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates :

EL50 (*Daphnia magna* (Water flea)): 3.2 mg/l
Exposure time: 48 h

Toxicity to algae :

EL50 (*Raphidocelis subcapitata* (freshwater green alga)): 2.9 mg/l
Exposure time: 72 h
NOELR (*Raphidocelis subcapitata* (freshwater green alga)): 1 mg/l
End point: Growth rate
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) :	NOELR: 1.228 mg/l Exposure time: 28 d Species: <i>Oncorhynchus mykiss</i> (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) :	NOELR: 2.144 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea)
Ecotoxicology Assessment	
Chronic aquatic toxicity :	Toxic to aquatic life with long lasting effects.
2-methylpropan-1-ol: Toxicity to fish :	LC50 (<i>Pimephales promelas</i> (fathead minnow)): 1,430 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia pulex</i> (Water flea)): 1,100 mg/l Exposure time: 48 h
Toxicity to algae :	EC50 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 1,799 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 20 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea)

12.2 Persistence and degradability

Components:

pirimiphos-methyl (ISO):

Stability in water : Degradation half life: 4 - 6 d

Remarks: Product is not persistent.

Hydrocarbons, C9, Aromatics:

Biodegradability : Result: Readily biodegradable.

2-methylpropan-1-ol:

Biodegradability : Result: Readily biodegradable.

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, bioaccumulating 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).

2-methylpropan-1-ol:

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	RID	IMDG	IATA
UN 1993	UN 1993	UN 1993	UN 1993

14.2 UN proper shipping name

ADR : FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE AND SOLVENT NAPHTHA)

RID : FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE AND SOLVENT NAPHTHA)

IMDG: FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE AND SOLVENT NAPHTHA)

IATA : FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE AND SOLVENT NAPHTHA)

14.3 Transport hazard class(es)

ADR	RID	IMDG	IATA
3	3	3	3

14.4 Packing group

ADR

Packing group : III
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : (D/E)

RID

Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

IMDG

Packing group : III
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)

Packing instruction (cargo aircraft): 366
Packing instruction (LQ): Y344

Packing group: III
Labels: Flammable Liquid

IATA (Passenger)

Packing instruction (passenger aircraft): 964
Packing instruction (LQ): Y964
Packing group: III
Labels: Miscellaneous

14.5 Environmental hazards

ADR	RID	IMDG
Environmentally hazardous : yes	Environmentally hazardous : yes	Marine pollutant : 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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII): Conditions of restriction for the following entries should be considered:

Number on list 3

4-methylpentan-2-one

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable
UK REACH List of substances subject to authorisation (Annex XIV): Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

	Quantity 1	Quantity 2
H3 STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE	50t	200t
P5c FLAMMABLE LIQUIDS	5,000 t	50,000 t
E1 ENVIRONMENTAL HAZARDS	100 t	200 t

Other regulations:

15.2 Chemical safety assessment

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

SECTION 16. OTHER INFORMATION

Full text of H-statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
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.
H412	Harmful 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
Asp. Tox. :	Aspiration hazard
Carc. :	Carcinogenicity
Eye Dam. :	Serious eye damage
Eye Irrit. :	Eye irritation

Flam. Liq. :	Flammable liquids
Skin Irrit. :	Skin irritation
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
GB EH40 :	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT :	UK. Biological monitoring guidance values
2000/39/EC / TWA :	Limit Value - eight hours
2000/39/EC / STEL :	Short 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)

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; KECL - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; 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:
Flam. Liq. 3	H226	Based on product data or assessment
Acute Tox. 4	H302	Based on product data or assessment
Eye Dam. 1	H318	Based on product data or assessment
Skin Sens. 1	H317	Based on product data or assessment
Carc. 2	H351	Calculation method
STOT SE 1	H370	Calculation method
STOT SE 3	H336	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 1	H372	Calculation method
Asp. Tox. 1	H304	Calculation method
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Calculation method

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

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