



syngenta

GROUP 3 INSECTICIDE



A capsule suspension formulation containing 50 g /l lambda-cyhalothrin and 1,2-benzisothiazolin-3-one.

For the control of insect pests in winter and spring wheat, winter and spring barley, spring and winter oats and durum wheat, oilseed rape, potatoes, sugar beet, beans, brassicas, peas, carrot, parsnip and pears.

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.

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

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



1 Litre

KUSTI®

A capsule suspension formulation containing 50 g /l lambda-cyhalothrin and 1,2-benzisothiazolin-3-one.

Warning

Harmful if swallowed.

May cause an allergic skin reaction.

Very toxic to aquatic life with long lasting effects.

Avoid breathing mist or vapours.

Wash skin thoroughly after handling.

Wear protective gloves.

If skin irritation or rash occurs: Get medical advice/ attention.

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 16656 UFI: FW96-A0SD-T005-K8MU



SAFETY PRECAUTIONS

(a) Operator protection

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

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate and when applying by hand-held equipment.

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

WASH CONCENTRATE from skin or eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.

IF YOU FEEL UNWELL, seek medical advice (show the label where possible).

(b) Environmental protection

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

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m

of the top of a ditch which is dry at the time of application. **DO NOT ALLOW DIRECT SPRAY** from hand held sprayers to fall within 1 m of the top of the bank of a static or flowing waterbody. Aim spray away from water.



DO NOT ALLOW DIRECT SPRAY from broadcast air-assisted applications to fall within 25m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 5m of the top of a ditch which is dry at the time of application. Aim spray away from water.

To protect aquatic organisms, respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements.

This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer or broadcast air-assisted sprayer either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The result of the LERAP must be recorded and kept available for three years.

TO PROTECT NON-TARGET INSECTS/ARTHROPODS respect an untreated buffer zone of 5m to non-crop land (see Directions for use).

(c) Storage and disposal

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

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

DO NOT RE-USE CONTAINER for any purpose.

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL INSECTICIDE

Crops	Maximum individual dose (ml product/ha).	Maximum total dose (ml product/ha/crop).	Latest time of application.
Winter and spring wheat and barley	100	400	Before late milk stage (GS 77)
Winter and spring oats	100	400	Before watery ripe stage (GS 71)
Oilseed rape (winter)	150	450	Before the end of flowering
Oilseed rape (spring)	150	450	6 weeks before harvest
Combining pea, field bean	150	300	25 days before harvest
Vining pea, edible podded pea	150	300	-
Potato	150	600	-
Sugar beet	150	300	8 weeks before harvest
Brussels sprout, cabbage, cauliflower, broccoli, calabrese	200	400	-
Pear	180	540ml /ha/ annum.	7 days before harvest
Carrot, parsnip	300	900	14 days before harvest

Other specific restrictions:

The following minimum intervals between applications must be observed:

7 days for oilseed rape, vining pea, edible podded pea, combining pea, field bean, sugar beet, carrot, parsnip and potato.

10 days for Brussels sprout, cabbage, cauliflower, broccoli, calabrese.

14 days for wheat, barley, oats and pears.

A maximum number of 4 applications per crop must not be exceeded.

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.

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.

To reduce effects on non-target insects or other arthropods:

For application to cereals: DO NOT SPRAY WITHIN 5m OF THE FIELD BOUNDARY¹.For application to other arable and vegetable crops using tractor mounted boom sprayers: Avoid spraying within 5m of the field boundary¹.

For application to pears using broadcast air-assisted sprayers: The best available application technique, which minimises off-target drift, should be used.

These buffer distances should be measured from the field boundary, which for the purposes of this labelling, is defined as from the edge of non-cropped land (i.e. land taken permanently out of agricultural production, including the 1-2 m strips adjacent to hedgerows and watercourses established under the Single Payment Scheme). Cropped land includes managed buffer strips (e.g. grass strips, wild flower margins and conservation headlands), but since these are usually set up as havens for wildlife it is best practice to minimise spray drift onto them.

RESISTANCE MANAGEMENT

Strains of some aphid species are resistant to many aphicides. Where aphids resistant to products containing lambda-cyhalothrin occur, KUSTI[®] is unlikely to give satisfactory control. Repeat treatments are likely to result in lower levels of control.

GENERAL INFORMATION

KUSTI acts by contact, therefore ensure thorough spray cover for good control.

Processed Crops: Taint tests have shown that KUSTI does not taint crops, but growers should consult processors before use.

CROP SPECIFIC INFORMATION**WINTER WHEAT, WINTER BARLEY, WINTER OATS AND DURUM WHEAT****Barley Yellow Dwarf Virus (Aphid Vectors)****Timing for High Risk (Virus Prone) Areas:**

a) Cereals sown in September: Apply a single KUSTI spray as a routine in the period mid-late October if BYDV is commonly a problem on the farm or in the locality. If aphids can be found in the crop earlier, spray immediately. Further treatments may be required in high risk areas especially during mild winters.

b) Cereals sown from October onwards: Follow recommendations for low risk areas.

Timing for Low Risk Areas:

A spray should only be applied in the years when the risk of infection is high, based on aphid monitoring and according to specialist advice. When aphids can be found in the crop and/or specialists identify a BYDV risk, spray immediately.

Note: Crops which follow closely a grass ley or weedy stubble, where there is a risk of direct aphid transfer to the crop should be treated as high risk.

Spring use

In the absence of an earlier application of KUSTI, treatment can also be worthwhile if aphids carrying BYDV are present up to GS Z32.

RATE OF USE

100 ml/ha

WATER VOLUME

200 l/ha

WINTER AND SPRING, WHEAT, BARLEY AND OATS AND DURUM WHEAT**Aphids on the ears** e.g. Grain Aphid, Rose-Grain Aphid

Timing: The optimum timing for application is after ear emergence (GS Z59). The latest time of application on wheat and barley is before GS Z77 and on oats is before GS Z71. Apply according to official thresholds.

Notes: When KUSTI is used for control of aphids on the ear, some reduction of aphids on the flag leaf will occur.

RATE OF USE 100 ml/ha	WATER VOLUME 200-300l/ha (Use sufficient water volume to ensure thorough crop penetration.)
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WINTER WHEAT**Yellow Cereal Fly** (*Opomyza florum*)

Timing: Apply at egg hatch, usually from late January onwards depending on the season. Early emerged crops are most at risk. Sprays applied for the control of BYDV will also give some control of this pest.

RATE OF USE 100 ml/ha	WATER VOLUME 200 l/ha
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WINTER & SPRING WHEAT**Orange Wheat Blossom Midge** (*Sitodiplosis mosellana*)

KUSTI can provide a reduction in damage in susceptible crops associated with this pest.

Timing: Monitoring of adult midge activity is essential to determine the optimum time for treatment. Pheromone traps in the crop should provide the best information on when to spray. Apply immediately the threshold numbers of adult egg laying midges are found. Crops between ear emergence and the start of flowering (GS Z51-59) are most vulnerable to attack, those at GS Z55 - 57 are most susceptible. To achieve the best results KUSTI should be used before large numbers of eggs are laid, as the product is active against adults. Late application is less likely to be effective and should be avoided. For further information on orange wheat blossom midge, including details on pest thresholds consult the HGCA information sheet on this pest or your local BASIS qualified agronomist.

RATE OF USE 100 ml/ha	WATER VOLUME 200 l/ha
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Gout Fly (*Chlorops tumilionis*)

Timing: Inspect crop regularly from the one leaf stage and apply when the first eggs are laid. For maximum effect, treatment must be made before the majority of eggs hatch. Efficacy will be reduced if treatment is applied when plant invasion has started.

100 ml/ha	200 l/ha
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WINTER AND SPRING OILSEED RAPE**Flea Beetle**

Timing: Apply at first signs of attack. Repeat 10-14 days later if necessary.

RATE OF USE 150 ml/ha	WATER VOLUME 200 l/ha
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Cabbage Stem Flea Beetle

Timing: Apply in the autumn when feeding damage is first seen on young rape plants to control the adults. To control the larvae, spray once larvae can be found in the plants, normally late October/early November. Monitor crops carefully for signs of further larvae infestation and apply a second spray if required. A routine spray in late October/early November can often be justified in known high risk areas.

100 ml/ha.	200 l/ha Add a non-ionic surfactant adjuvant that is not an organosilicone in accordance with the manufacturer's instructions.
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Turnip Yellow Virus (Aphid Vectors)

Timing: Apply as soon as aphids can be found in the crop. A second spray may be needed 3-5 weeks later if aphids continue to migrate into the crop. Applications made late in the autumn, ie. from November onwards, may be less effective in controlling the virus if aphid migration and virus transmission had begun several weeks earlier.

KUSTI applied to control aphid vectors of Turnip Yellow Virus will reduce the level of virus in the crop and will also provide good control of Cabbage Stem Flea Beetle adults and larvae depending on their incidence and the period of egg hatch.

150 ml/ha	200 l/ha Add a non-ionic surfactant adjuvant that is not an organosilicone in accordance with the manufacturer's instructions.
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Pollen Beetles

Timing: Apply at the green/yellow bud stage according to specialist advice or if official thresholds are reached.

150 ml/ha	200-300l/ha (Use sufficient water volume to ensure thorough crop penetration)
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Seed Weevil and Pod Midge

Timing: Applications should be made during the flowering period when seed weevil numbers reach the threshold for spraying. Best results are normally achieved when application coincides with the onset of peak adult activity. This often occurs between the 20% pod set stage and the end of flowering on the main raceme (i.e. 75% petal fall across the entire crop). Avoid spraying in the heat of the day when bees are particularly active.

For spring sown varieties apply at green to yellow bud stage if seed weevils are present at threshold levels. Repeat application during flowering if the attack is prolonged.

The latest time of application to winter oilseed rape is the end of flowering and the latest time for spring oilseed rape is six weeks before harvest.

150 ml/ha	200-300 l/ha (Use sufficient water volume to ensure thorough crop penetration)
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WINTER AND SPRING FIELD BEANS**Pea and Bean Weevil**

Timing: For the reduction of leaf notching/feeding damage, apply if there is a risk of severe damage by adult weevils to the growing points of the crop in the early stages of growth. Under high pest pressure a repeat application may be required 2 to 3 weeks after the initial application.

Where there is a history of severe weevil damage, a first application made at the first signs of adult attack (leaf notching) may be beneficial in some situations.

RATE OF USE 150 ml/ha	WATER VOLUME 200-300 l/ha (Use sufficient water volume to ensure thorough crop penetration.)
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POTATOES

Aphids	
Timing: Ware crops: Use KUSTI for the control of <i>Macrosiphum euphorbiae</i> and other aphid pests. Where resistant forms of <i>Myzus persicae</i> are present or suspected KUSTI should not be used. KUSTI can also provide incidental control of other pests e.g. cut-worms if the timing coincides with that for aphid control.	
RATE OF USE 150 ml/ha	WATER VOLUME At least 400 l/ha (Use sufficient water volume to ensure thorough crop penetration)

SUGAR BEET

Flea Beetle	
Timing: Apply as soon as adult feeding damage is seen . Repeat if necessary.	
RATE OF USE 150 ml/ha	WATER VOLUME 200 l/ha
Beet Leaf Miner (Mangold Fly)	
Timing: Apply at egg hatch or according to specialist advice. Repeat if necessary.	
150 ml/ha	200 l/ha
Cutworm	
Timing: Apply according to specialist advice at egg hatch and repeat 10-14 days later. The latest time of application is eight weeks before harvest.	
150 ml/ha	400-1000 l/ha (Use sufficient water volume to ensure thorough crop penetration).

BRUSSELS SPROUT, CABBAGE, CAULIFLOWER AND BROCCOLI (INCLUDING CALABRESE)

Caterpillars	
Timing: Apply at first sign of attack. Repeat if necessary.	
RATE OF USE 100 ml/ha	WATER VOLUME 300-600 l/ha (Use sufficient water volume to ensure thorough crop penetration. Consider applying to Brussels Sprouts through a drop-leg sprayer.) Add a non-ionic surfactant adjuvant that is not an organosilicone in accordance with the manufacturer's instructions.
Whitefly	
Timing: Apply at first sign of attack. Repeat 10-14 days later if necessary.	
200 ml/ha	300-600 l/ha (Use sufficient water volume to ensure thorough crop penetration. Consider applying to Brussels Sprouts through a drop-leg sprayer.) Add a non-ionic surfactant adjuvant that is not an organosilicone in accordance with the manufacturer's instructions.

PEAS

Pea & Bean Weevil	
Timing: For the reduction of leaf notching/feeding damage, apply if there is a risk of severe damage by adult weevils to the growing points of the crop in the early stages of growth. Under high pest pressure a repeat application may be required 2 to 3 weeks after the initial application.	
Where there is a history of severe weevil damage, a first application made at the first signs of adult attack (leaf notching) may be beneficial in some situations.	
RATE OF USE 150 ml/ha	WATER VOLUME 200 l/ha
Pea Moth	
Timing: Combining Peas - Apply to flowering crops according to official advice or as indicated by pheromone traps. Spray later crops as soon as they are in full flower. Apply a second treatment 10-14 days after the first.	
Edible podded and Vining Peas - Crops which are in full flower should be treated with a single spray at the calculated date.	
100 ml/ha	300 - 600 l/ha (Use sufficient water volume to ensure thorough crop penetration.)
Pea Aphid	
Timing: Apply to flowering crops according to specialist advice or when thresholds are reached. Repeat if necessary. Inspect the crop carefully, especially during the early stages of flowering.	
100 ml/ha (see notes below)	300 - 600 l/ha (Use sufficient water volume to ensure thorough crop penetration)
Notes: KUSTI will provide effective control of early aphid infestations of pea aphid which are confined to the terminal growing points of the crop and are exposed to spray droplets. For established aphid infestations on the growing points and for aphid infestations which are sheltered within the crop canopy apply KUSTI in tank mixture with APHOX at 140g/ha.	
Where aphids are the only pest present and are well established throughout a crop canopy which is dense it is preferable to apply APHOX alone at 280g/ha.	
Pea Midge	
Timing: Apply within 3-5 days of the first adult midges being found in the crop. Repeat 7-10 days later if midge activity continues. Sprays can be delayed if the weather is not suitable for midge activity or if the crop is not at a susceptible growth stage.	
Note: Consult a crop specialist for advice on application timing and information on midge activity in your area.	
150 ml/ha	300 - 600 l/ha (Use sufficient water volume to ensure thorough crop penetration)

PEARS

Pear Sucker	
Timing: Apply when first sucker eggs are being laid, usually in late February/early March. Should sucker build up in the summer in the absence of predators, apply KUSTI at the same rate and repeat after 2-3 weeks if necessary. If predators are present, use 'Dimilin' WP.	
RATE OF USE 180 ml/ha	WATER VOLUME 200 - 2000 l/ha (Use sufficient water volume to ensure thorough crop penetration.)
Resistance: Pear suckers resistant to one or more groups of insecticides are widespread. Where strains resistant to products containing pyrethroid insecticide occur, KUSTI is unlikely to give satisfactory control of this pest. Where repeat treatment is necessary use different active ingredients.	

CARROTS AND PARSNIPS

Cutworm Timing: Apply at egg hatch or according to specialist advice and repeat 10-14 days later.	
RATE OF USE 150 ml/ha	WATER VOLUME 400-1000 l/ha (Use sufficient water volume to ensure thorough crop penetration)
Carrot Fly (<i>Psila rosae</i>) For useful levels of control of damage to roots caused by second generation. Timing: KUSTI is active against adult flies, but not larvae in the soil or carrot root. The first application of KUSTI should be applied one week before the forecast of 10% (first) egg-laying. Contact HRI or your specialist advisor for details. Subsequent applications should be made at 12-14 day intervals until the risk from carrot fly has passed. Maintain a regular programme of sprays to reduce the incidence of egg laying as far as possible. The optimum time for application is 4 – 6 pm on warm days.	
RATE OF USE 300 ml product per hectare	WATER VOLUME 300 – 600 litres per hectare. Apply as a medium to fine spray to achieve good coverage of the foliage.
MAXIMUM TOTAL DOSE 900 ml product/ha/crop	

This product is to be used only in accordance with the recommendations and instructions provided with this pack. Use in any other circumstances is entirely at user's risk.

MIXING AND SPRAYING

Preparation of sprayer: Part fill the spray tank with clean water and start agitation. Shake the container and add the correct amount of KUSTI to the sprayer using a filling device (eg. induction bowl, probe etc.) or by direct addition to the spray tank.

Wash out container thoroughly. Preferably use an integrated pressure rinsing device or manually rinse three times. Add washings to the sprayer at the time of filling. Dispose of rinsed container safely according to DEFRA Code of Practice.

Spraying: Ensure adequate volume and pressure is used and that the sprayer is correctly calibrated before use. Do not leave the spray liquid in the sprayer for long periods (i.e. during meals or overnight).

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

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

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'extension of use' approval or is otherwise permitted under the Plant Protection Product Regulations 1995.

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

SAFETY DATA SHEET - V11.1

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

1.1 Product Identifier

Trade name: KUSTI

Design code: A12688A

Product Registration Number: MAPP 16656

Unique Formula Identifier (UFI): FW96-A0SD-T005-K8MU

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: product.technical_enquiries@syngenta.com

1.4 Emergency telephone number

Emergency phone No.: +44 (0) 1484 538444

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

H302: Harmful if swallowed.

Skin sensitisation, Category 1

H317: May cause an allergic skin reaction.

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

Warning

Hazard Statements

H302

Harmful if swallowed.

H317

May cause an allergic skin reaction.

H410

Very toxic to aquatic life with long lasting effects.

Precautions Statements

P261

Avoid breathing mist or vapours.

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves.

P333+P313

If skin irritation or rash occurs: Get medical advice/ attention.

P391

Collect spillage

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:

- lambda-cyhalothrin (ISO)
- 1,2-benzisothiazol-3(2H)-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, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Components

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
lambda-cyhalothrin (ISO)	91465-08-6 415-130-7 607-252-00-6	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Aquatic Acute 1; H400 Aquatic Chronic 1; H4100 M-Factor (Acute aquatic toxicity): 100,00010,000 M-Factor (Chronic aquatic toxicity): 100,00010,000	>= 2.5 - < 10
hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned UK-01-2250044631-9-0001	Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 2.5 - < 10
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox.4; H302 Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1 specific concentration limit Skin Sens. 1; H317 >= 0.05 %	>= 0.05 - < 0.1
Substances with a workplace exposure limit :			
propane-1,2-diol	57-55-6 200-338-0		>= 20 - < 30

For explanation of abbreviations see section 16.

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: Aspiration may cause pulmonary oedema and pneumonia. Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.

4.3 Indication of any immediate medical attention and special treatment needed

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

5. FIRE-FIGHTING MEASURES

5.1 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.

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.

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.

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 materials 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.

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: No special storage conditions required. 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 feedingsuffs.

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 uses

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propane-1,2-diol	57-55-6	TWA (particles)	10 mg/m ³	GB EH40
		TWA (Total vapour and particles)	150 ppm 474 mg/m ³	GB EH40
lambda-cyhalothrin (ISO)	91465-08-6	TWA	0.04 mg/m ³ (Skin)	Syngenta
hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned	TWA	8 ppm 50 mg/m ³	Supplier

Derived No Effect Level (DNEL)

Substance name	End Use	Exposure routes	Potential health effects	Value
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Consumers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	30 mg/m ³
	Workers	Inhalation	Long-term local effects	10 mg/m ³
hydrocarbons, C10-C13, aromatics, <1% naphthalene	Workers	Inhalation	Long-term systemic effects	151 mg/m ³
	Workers	Dermal	Long-term systemic effects	12.5 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m ³
	Consumers	Dermal	Long-term systemic effects	7.5 mg/kg
	Consumers	Oral	Long-term systemic effects	7.5 mg/kg
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m ³
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m ³
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
propane-1,2-diol	Fresh water	260 mg/l
	Marine water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Marine sediment	57.2 mg/kg
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Marine water	0.000403 mg/l
	Sewage treatment plant	1.03 mg/l
	Fresh water sediment	0.0499 mg/kg
	Marine sediment	0.00499 mg/kg
	Freshwater - intermittent	0.0011 mg/l
	Marine water - intermittent	0.000110 mg/l
	Soil	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: Impervious clothing

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

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

When selecting personal protective equipment, seek appropriate professional advice.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid, opaque

Colour: white

Odour: No data available

Odour Threshold: No data available

pH: 6.1, Concentration: 1 %w/v

Melting point/freezing point: No data available

Initial boiling point and boiling range: 100 °C

Flash point: Method: Pensky-Martens closed cup - does not flash

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: 1.048 g/cm³ (20 °C)

Water solubility: completely miscible

Solubility in other solvents: Solvent: Water

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: 420 °C

Decomposition temperature: No data available

Viscosity, dynamic: 50.8 mPa.s (20 °C)

Viscosity, kinematic: No data available

Explosive properties: Not explosive

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

9.2 Other information

Self-heating substances: The substance or mixture is not classified as self heating.

Surface tension: 57.6 mN/m, 1 %, 20.5 °C

Particle size: No data available

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.

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): 522 mg/kg

Acute inhalation toxicity: LC50 (Rat, male and female): > 2.07 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

Remarks: The toxicological data has been taken from products of similar composition.

Components:

lambda-cyhalothrin (ISO):

Acute oral toxicity: LD50 (Rat, female): 56 mg/kg

LD50 (Rat, male): 79 mg/kg

Acute toxicity estimate: 100.0 mg/kg

Method: Converted acute toxicity point estimate

Acute inhalation toxicity: LC50 (Rat, male and female): 0.06 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity: LD50 (Rat, female): 696 mg/kg

LD50 (Rat, male): 632 mg/kg

Acute toxicity estimate: 1,100 mg/kg

Method: Converted acute toxicity point estimate

1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity: LD50 (Rat): 1,020 mg/kg

propane-1,2-diol:

Acute oral toxicity: LD50 (Rat): > 20,000 mg/kg

Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity: LC50 (Rabbit): 317,042 mg/l

Exposure time: 2 h

Test atmosphere: dust/mist

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

Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species: Rabbit

Result: Mild skin irritation

Components:

lambda-cyhalothrin (ISO):

Species: Rabbit

Result: No skin irritation

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Result: Repeated exposure may cause skin dryness or cracking.

1,2-benzisothiazol-3(2H)-one:

Species: Rabbit

Result: Mild skin irritation

propane-1,2-diol:

Result: No skin irritation

Serious eye damage/eye irritation**Product:**

Species: Rabbit

Result: No eye irritation

Components:**lambda-cyhalothrin (ISO):**

Species: Rabbit

Result: No eye irritation

1,2-benzisothiazol-3(2H)-one:

Species: Rabbit

Result: Risk of serious damage to eyes.

propane-1,2-diol:

Result: No eye irritation

Respiratory or skin sensitisation**Product:**

Species: Humans

Result: Probability or evidence of skin sensitisation in humans

Test Type: Buehler Test

Species: Guinea pig

Result: Does not cause skin sensitisation.

Components:**lambda-cyhalothrin (ISO):**

Test Type: Maximisation Test

Species: Guinea pig

Result: Does not cause skin sensitisation.

Test Type: Local lymph node assay (LLNA)

Species: Mouse

Result: Does not cause skin sensitisation.

1,2-benzisothiazol-3(2H)-one:

Result: Probability or evidence of skin sensitisation in humans

propane-1,2-diol:

Result: Does not cause skin sensitisation.

Germ cell mutagenicity**Components:****lambda-cyhalothrin (ISO):**

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

1,2-benzisothiazol-3(2H)-one:

Germ cell mutagenicity- Assessment: Weight of evidence does not support classification as a germ cell mutagen.

propane-1,2-diol:

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

Carcinogenicity**Components:****lambda-cyhalothrin (ISO):**

Carcinogenicity - Assessment: Weight of evidence does not support classification as a carcinogen

propane-1,2-diol:

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

Reproductive toxicity**Components:****lambda-cyhalothrin (ISO):**

Reproductive toxicity - Assessment: Weight of evidence does not support classification for reproductive toxicity

1,2-benzisothiazol-3(2H)-one:

Reproductive toxicity - Assessment: Weight of evidence does not support classification for reproductive toxicity

propane-1,2-diol:

Reproductive toxicity - Assessment: No toxicity to reproduction, No effects on or via lactation

Animal testing did not show any effects on foetal development.

STOT - single exposure**Components:****lambda-cyhalothrin (ISO):**

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

propane-1,2-diol:

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

STOT - repeated exposure**Components:****lambda-cyhalothrin (ISO):**

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

1,2-benzisothiazol-3(2H)-one:

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

propane-1,2-diol:

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

Aspiration toxicity**Components:****hydrocarbons, C10-C13, aromatics, <1% naphthalene:**

May be fatal if swallowed and enters airways.

propane-1,2-diol:

No aspiration toxicity classification

Further information**Product:**

Remarks: May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Components:**lambda-cyhalothrin (ISO):**

Remarks: May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Components:

lambda-cyhalothrin (ISO):

Toxicity to fish:	LC50 (<i>Leuciscus idus</i> (Golden orfe)): 0.000078 mg/l Exposure time: 96 h LC50 (<i>Ictalurus punctatus</i> (channel catfish)): 0.00016 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.00036 mg/l Exposure time: 48 h LC50 (<i>Americamysis</i>): 0.000007 mg/l Exposure time: 48 h EC50 (<i>Hyalella azteca</i> (Amphipod)): 0.000002 mg/l Exposure time: 48 h ErC50 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): > 0.31 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants:	10,000
M-Factor (Acute aquatic toxicity):	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h
Toxicity to microorganisms:	NOEC: 0.000031 mg/l Exposure time: 300 d Species: <i>Pimephales promelas</i> (fathead minnow)
Toxicity to fish (Chronic toxicity):	
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.000002 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea) NOEC: 0.00022 µg/l Exposure time: 28 d Species: <i>Americamysis</i>
M-Factor (Chronic aquatic toxicity):	10,000
hydrocarbons, C10-C13, aromatics, <1% naphthalene:	
Toxicity to fish:	LL50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 3.6 mg/l Exposure time: 96 h Remarks: Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates:	EL50 (<i>Daphnia magna</i> (Water flea)): 1.1 mg/l Exposure time: 48 h Remarks: Information given is based on data obtained from similar substances.
Toxicity to algae/aquatic plants:	EL50 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 7.9 mg/l End point: Growth rate Exposure time: 72 h Remarks: Information given is based on data obtained from similar substances. NOELR (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 0.22 mg/l End point: Growth rate Exposure time: 72 h Remarks: Information given is based on data obtained from similar substances.

Ecotoxicology Assessment

Chronic aquatic toxicity:

1,2-benzisothiazol-3(2H)-one:

Toxicity to fish:

Toxic to aquatic life with long lasting effects.

LC50 (*Oncorhynchus mykiss* (rainbow trout)): 2.18 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): 2.94 mg/l
Exposure time: 48 h

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 0.15 mg/l

Exposure time: 72 h

EC10 (*Raphidocelis subcapitata* (freshwater green alga)): 0.04 mg/l

End point: Growth rate

Exposure time: 72 h

1

M-Factor (Acute aquatic toxicity):

Toxicity to fish (Chronic toxicity):

NOEC: 0.3 mg/l

Exposure time: 28 d

Species: *Oncorhynchus mykiss* (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 1.7 mg/l

Exposure time: 21 d

Species: *Daphnia* (water flea)

propane-1,2-diol:

Toxicity to fish:

LC50 (*Oncorhynchus mykiss* (rainbow trout)): 40,613 mg/l

Exposure time: 96 h

Test Type: static test

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:

(*Ceriodaphnia dubia* (water flea)): 18,340 mg/l

Exposure time: 48 h

Test Type: static test

Method: OECD Test Guideline 202

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 19,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 13,020 mg/l

Exposure time: 7 d

Species: *Ceriodaphnia dubia* (Water flea)

Test Type: semi-static test

12.2 Persistence and degradability

Components:

lambda-cyhalothrin (ISO):

Biodegradability: Result: Not readily biodegradable.

Stability in water: Degradation half life (DT50): 7 d

Remarks: Product is not persistent.

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Biodegradability: Result: Readily biodegradable.

1,2-benzisothiazol-3(2H)-one:

Biodegradability: Result: rapidly degradable

propane-1,2-diol:

Biodegradability: Result: Readily biodegradable.

Biodegradation: 81 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential:**Components:****lambda-cyhalothrin (ISO):**

Bioaccumulation: Remarks: Lambda-cyhalothrin bioaccumulates.

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation: Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil:**Components:****lambda-cyhalothrin (ISO):**

Distribution among environmental compartments: Remarks: immobile

Stability in soil: Dissipation time: 56 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:**lambda-cyhalothrin (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).

1,2-benzisothiazol-3(2H)-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.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product:** Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.**Contaminated packaging:** Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.**14. TRANSPORT INFORMATION****14.1 UN number**

ADR	RID	IMDG	IATA
UN 3082	UN 3082	UN 3082	UN 3082

14.2 UN proper shipping name**ADR :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LAMBDA-CYHALOTHRIN, 1,2-BENZISOTHIAZOL-3(2H)-ONE)**RID :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LAMBDA-CYHALOTHRIN, 1,2-BENZISOTHIAZOL-3(2H)-ONE)**IMDG :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LAMBDA-CYHALOTHRIN, 1,2-BENZISOTHIAZOL-3(2H)-ONE)**IATA :** Environmentally hazardous substance, liquid, n.o.s. (LAMBDA-CYHALOTHRIN, 1,2-BENZISOTHIAZOL-3(2H)-ONE)**14.3 Transport hazard class(es)**

ADR	RID	IMDG	IATA
9	9	9	9

14.4 Packing group

	ADR	RID
	Packing group : III Classification Code : M6 Hazard Identification Number : 90 Labels : 9 Tunnel restriction code : (-)	Packing group : III Classification Code : M6 Hazard Identification Number : 90 Labels : 9
IMDG	IATA (Cargo)	IATA (Passenger)
Packing group : III Labels : 9 EmS Code : F-A, S-F	Packing instruction (cargo aircraft): 964 Packing instruction (LQ): Y964 Packing group: III Labels: Miscellaneous	Packing instruction (passenger aircraft): 964 Packing instruction (LQ): Y964 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	RID	IMDG	IATA (Passenger)	IATA (Cargo)
Environmentally hazardous: yes	Environmentally hazardous: yes	Marine pollutant: yes	Environmentally hazardous: yes	Environmentally hazardous: yes

14.6 Special precautions for user

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

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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 Candidate list of substances of very high concern (SVHC) for Authorisation: Not applicable

The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain): naphthalene

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: Not applicable

15.2 Chemical Safety Assessment

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

16. OTHER INFORMATION

Full text of H-Statements	Full text of other abbreviations
H301 Toxic if swallowed	Acute Tox.: Acute toxicity
H302 Harmful if swallowed	Aquatic Acute: Acute aquatic toxicity
H304 May be fatal if swallowed and enters airways.	Aquatic Chronic: Chronic aquatic toxicity
H311 Toxic in contact with skin	Asp. Tox.: Aspiration hazard
H315 Causes skin irritation	Eye Dam.: Serious eye damage
H317 May cause an allergic skin reaction	Skin Irrit.: Skin irritation
H318 Causes serious eye damage	Skin Sens.: Skin sensitisation
H330 Fatal if inhaled	GB EH40: UK, EH40 WEL - Workplace Exposure Limits
H400 Very toxic to aquatic life	Syngenta: Syngenta Occupational Exposure Limit
H410 Very toxic to aquatic life with long lasting effects	GB EH40 / TWA: Long-term exposure limit (8-hour TWA reference period)
H411 Toxic to aquatic life with long lasting effects	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; IECS - 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:

Acute Tox. 4	H302	Based on product data or assessment
Skin Sens. 1	H317	Based on product data or assessment
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.