



# SAFETY DATA SHEET

Corteva Agriscience UK Ltd

Safety Data Sheet according to Reg. (EU) No 2015/830

**Product name: ASTROKERB**

**Revision Date: 10.12.2020**

**Version: 3.3**

**Date of last issue: 22.10.2019**

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Corteva Agriscience UK Ltd encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

**Product name:** ASTROKERB

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses:** Plant Protection Product

### 1.3 Details of the supplier of the safety data sheet

#### COMPANY IDENTIFICATION

Corteva Agriscience UK Ltd  
CPC2 CAPITAL PARK  
FULBOURN CAMBRIDGE - England - CB21 5XE  
UNITED KINGDOM

**Customer Information Number** : +44 8006 89 8899  
**E-mail address** : SDS@corteva.com

### 1.4 EMERGENCY TELEPHONE

**24-Hour Emergency Contact** : +44 161 88 41235  
**Local Emergency Contact** : +44 161 88 41235

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008:

Carcinogenicity - Category 2 - H351

Short-term (acute) aquatic hazard - Category 1 - H400

Long-term (chronic) aquatic hazard - Category 1 - H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008:**

**Hazard pictograms****Signal Word: WARNING****Hazard statements**

H351 Suspected of causing cancer.  
 H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P202 Do not handle until all safety precautions have been read and understood.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P391 Collect spillage.  
 P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

**Supplemental information**

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.  
 EUH208 Contains: 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

**2.3 Other hazards**

No data available

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**


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**3.2 Mixtures**

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 23950-58-5 EC-No. 245-951-4 Index-No. 616-055-00-4	–	43.7%	Propyzamide (ISO)	Carc. - 2 - H351 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410

<b>CASRN</b> 566191-87-5 <b>EC-No.</b> Not available <b>Index-No.</b> -	-	0.6%	Aminopyralid Potassium	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
<b>CASRN</b> 57-55-6 <b>EC-No.</b> 200-338-0 <b>Index-No.</b> -	01-2119456809-23	>= 3.0 - < 10.0 %	Propylene glycol	Not classified

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components. For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: FIRST AID MEASURES

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### 4.1 Description of first aid measures

**General advice:**

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** No emergency medical treatment necessary.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

### 4.2 Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Extinguishing media

**Suitable extinguishing media:** Water spray Alcohol-resistant foam

**Unsuitable extinguishing media:** None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products:** No data available

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health.

### 5.3 Advice for firefighters

**Fire Fighting Procedures:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**6.1 Personal precautions, protective equipment and emergency procedures:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**6.2 Environmental precautions:** If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and materials for containment and cleaning up:** Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. Keep in suitable, closed containers for disposal. Wipe up with absorbent material (e.g. cloth, fleece). See Section 13, Disposal Considerations, for additional information.

### 6.4 Reference to other sections:

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: HANDLING AND STORAGE

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**7.1 Precautions for safe handling:** Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in a closed container. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.  
Unsuitable materials for containers: None known.

**7.3 Specific end use(s):** Refer to product label.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

### 8.2 Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

#### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

#### Skin protection

**Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or

discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

### Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	Liquid.
Color	Brown
Odor	Mild
Odor Threshold	No test data available
pH	7.2 1% pH Electrode (1% aqueous suspension)
Melting point/range	Not applicable
Freezing point	No data available
Boiling point (760 mmHg)	No test data available
Flash point	<b>closed cup</b> > 100 °C <i>Pensky-Martens Closed Cup ASTM D 93</i>
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	No test data available
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	No test data available
Water solubility	No test data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	<i>EC Method A15</i> none below 400 degC
Decomposition temperature	No data available
Kinematic Viscosity	Not applicable
Explosive properties	No <i>EEC A14</i>
Oxidizing properties	No significant increase (>5C) in temperature.

### 9.2 Other information

Liquid Density	1.139 g/cm <sup>3</sup> at 20.0 °C <i>Digital density meter</i>
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## SECTION 10: STABILITY AND REACTIVITY

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**10.1 Reactivity:** Not classified as a reactivity hazard.

**10.2 Chemical stability:** No decomposition if stored and applied as directed. Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** None known.  
No hazards to be specially mentioned.

**10.4 Conditions to avoid:** None known.

**10.5 Incompatible materials:** None.

**10.6 Hazardous decomposition products**  
No hazardous decomposition products are known.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product:

LD50, Rat, female, > 5,000 mg/kg

##### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:

LD50, Rat, > 5,000 mg/kg

##### Acute inhalation toxicity

No adverse effects are anticipated from inhalation. Based on the available data, respiratory irritation was not observed.

As product:

LC50, Rat, 4 Hour, dust/mist, > 5.5 mg/l No deaths occurred at this concentration.

#### Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

**Serious eye damage/eye irritation**

Essentially nonirritating to eyes.

**Sensitization**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

For the active ingredient(s):

In animals, effects have been reported on the following organs:

Adrenal gland.

Gastrointestinal tract.

Kidney.

Liver.

Ovaries.

Pancreas.

Thyroid.

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

**Carcinogenicity**

For the active ingredient(s): Propyzamide. Has caused cancer in laboratory animals.

**Teratogenicity**

For the active ingredient(s): Propyzamide. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

**Reproductive toxicity**

For the active ingredient(s): Propyzamide. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**Mutagenicity**

For the active ingredient(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

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## SECTION 12: ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

**12.1 Toxicity**

**Acute toxicity to fish**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50, Rainbow trout (*Oncorhynchus mykiss*), static test, 96 Hour, > 30.4 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, water flea *Daphnia magna*, static test, 48 Hour, > 34.5 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth inhibition, 72 Hour, 6.4 mg/l

ErC50, *Lemna gibba*, Growth inhibition, 7 d, 5.5 mg/l

ErC50, *Myriophyllum spicatum*, 14 d, 0.244 mg/l

NOEC, *Myriophyllum spicatum*, 14 d, 0.0191 mg/l

**Toxicity to Above Ground Organisms**

oral LD50, *Apis mellifera* (bees), 48 Hour, > 330.25micrograms/bee

contact LD50, *Apis mellifera* (bees), 48 Hour, > 300micrograms/bee

## 12.2 Persistence and degradability

### Propyzamide (ISO)

**Biodegradability:** Biodegradation may occur under aerobic conditions (in the presence of oxygen).  
No data available

**Stability in Water (1/2-life)**

Hydrolysis, pH 5 - 9, Stable

### Aminopyralid Potassium

**Biodegradability:** For similar active ingredient(s). Aminopyralid. Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

### Propylene glycol

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

10-day Window: Pass

**Biodegradation:** 81 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

**Biodegradation:** 96 %

**Exposure time:** 64 d

**Method:** OECD Test Guideline 306 or Equivalent

## 12.3 Bioaccumulative potential

### Propyzamide (ISO)

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 3

**Bioconcentration factor (BCF):** 49 Lepomis macrochirus (Bluegill sunfish)

#### **Aminopyralid Potassium**

**Bioaccumulation:** For similar active ingredient(s). Aminopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

#### **Propylene glycol**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.07 Measured

**Bioconcentration factor (BCF):** 0.09 Estimated.

### 12.4 Mobility in soil

#### **Propyzamide (ISO)**

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient (Koc):** 840 Measured

#### **Aminopyralid Potassium**

For similar active ingredient(s).

Aminopyralid.

Potential for mobility in soil is very high (Koc between 0 and 50).

#### **Propylene glycol**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** < 1 Estimated.

### 12.5 Results of PBT and vPvB assessment

#### **Propyzamide (ISO)**

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).

#### **Aminopyralid Potassium**

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).

#### **Propylene glycol**

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

#### **Propyzamide (ISO)**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

#### **Aminopyralid Potassium**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

#### **Propylene glycol**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### 13.1 Waste treatment methods

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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## SECTION 14: TRANSPORT INFORMATION

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### Classification for ROAD and Rail transport (ADR/RID):

- |                                   |  |
|-----------------------------------|--|
| 14.1 UN number                    | UN 3082  |
| 14.2 UN proper shipping name      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Propyzamide) |
| 14.3 Transport hazard class(es)   | 9  |
| 14.4 Packing group                | III  |
| 14.5 Environmental hazards        | Propyzamide  |
| 14.6 Special precautions for user | Hazard Identification Number: 90                                 |

### Classification for SEA transport (IMO-IMDG):

- |   |  |
|---|--|
| 14.1 UN number  | UN 3082  |
| 14.2 UN proper shipping name  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Propyzamide) |
| 14.3 Transport hazard class(es)   | 9  |
| 14.4 Packing group  | III  |
| 14.5 Environmental hazards  | Propyzamide  |
| 14.6 Special precautions for user   | EmS: F-A, S-F  |
| 14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code | Consult IMO regulations before transporting ocean bulk           |

### Classification for AIR transport (IATA/ICAO):

- |                |         |
|----------------|---------|
| 14.1 UN number | UN 3082 |
|----------------|---------|

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<b>14.2 UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s.(Propyzamide)
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special precautions for user</b>	No data available.

**Further information:**

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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**SECTION 15: REGULATORY INFORMATION**

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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****REACH Regulation (EC) No 1907/2006**

This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

**Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.**

Listed in Regulation: ENVIRONMENTAL HAZARDS

Number in Regulation: E1

100 t

200 t

**15.2 Chemical safety assessment**

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

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## SECTION 16: OTHER INFORMATION

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### Full text of H-Statements referred to under sections 2 and 3.

H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Carc. - 2 - H351 - Calculation method  
 Aquatic Acute - 1 - H400 - On basis of test data.  
 Aquatic Chronic - 1 - H410 - On basis of test data.

### Revision

Identification Number: / Issue Date: 10.12.2020 / Version: 3.3

DAS Code: GF-2540

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Carc.	Carcinogenicity

### Full text of other abbreviations

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; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI -

Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Corteva Agriscience UK Ltd urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

GB