

SAFETY DATA SHEET

CORTEVA AGRISCIENCE FRANCE S.A.S.

Product name: RUNNER™ 240SC

Issue Date: 08/05/2021

Print Date: 08/05/2021

CORTEVA AGRISCIENCE FRANCE S.A.S. 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.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: RUNNER™ 240SC

Recommended use of the chemical and restrictions on use

Identified uses: Intermediate

COMPANY IDENTIFICATION

CORTEVA AGRISCIENCE FRANCE S.A.S.
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Long-term (chronic) aquatic hazard - Category 2 - H411

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

Label elements

Hazard pictograms



Hazard statements

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P391 Collect spillage.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental information

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

EUH208 Contains: 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

CASRN / EC-No. / Index-No.	Concentration	Component	Classification
CASRN 161050-58-4 EC-No. 605-245-2 Index-No. -	22.586%	Methoxyfenozide	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
CASRN 78330-21-9 EC-No. - Index-No. -	>= 1.0 - < 3.0 %	Ethoxylated Alcohols, C12 to C15	Acute Tox. - 4 - H302 Eye Dam. - 1 - H318
CASRN 2634-33-5 EC-No. 220-120-9 Index-No. 613-088-00-6	>= 0.025 - < 0.05 %	1,2-Benzisothiazolin-3-one	Acute Tox. - 4 - H302 Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318 Skin Sens. - 1 - H317 Aquatic Acute - 1 - H400 Aquatic Chronic - 3 - H412

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

4. FIRST AID MEASURES**Description of first aid measures****General advice:** If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

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.

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

Ingestion: No emergency medical treatment necessary.

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.

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.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray Alcohol-resistant foam

Unsuitable extinguishing media: None known.

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. Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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.

6. ACCIDENTAL RELEASE MEASURES

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

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. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

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). Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). See Section 13, Disposal Considerations, for additional information. See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

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.

Conditions for safe storage, including any incompatibilities: Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

Component	Regulation	Type of listing	Value/Notation
Methoxyfenozide	Dow IHG	TWA Respirable fraction	3 mg/m ³
	Dow IHG	TWA Inhalable fraction	10 mg/m ³
1,2-Benzisothiazolin-3-one	Dow IHG	TWA	0.06 mg/m ³
	Dow IHG	STEL	0.1 mg/m ³

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.

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. Local exhaust ventilation may be necessary for some 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 gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 3 or higher (breakthrough time greater than 60 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: Wear clean, body-covering clothing.

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).

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid.
Color	Tan
Odor	Mild
Odor Threshold	No test data available
pH	7
Melting point/range	Not applicable

Freezing point	No data available
Boiling point (760 mmHg)	No test data available
Flash point	closed cup > 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 to liquids
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	Not applicable
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	No test data available
Explosive properties	No
Oxidizing properties	No
Liquid Density	1.06 g/cm ³ at 20 °C
Molecular weight	No data available

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

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

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

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

Conditions to avoid: None known.

Incompatible materials: None.

Hazardous decomposition products
No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity

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

As product:

LD50. Rat. > 5,000 mg/kg No deaths occurred at this concentration.

Acute dermal toxicity

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

As product:

LD50. Rat. male and female. > 2,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility. No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

As product:

LC50. Rat. 4 Hour. Aerosol. > 0.9 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Essentially nonirritating to eyes.

Sensitization

For skin sensitization:

As product:

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)

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

Carcinogenicity

Active ingredient did not cause cancer in laboratory animals.

Teratogenicity

For the active ingredient(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

In animal studies, active ingredient did not interfere with reproduction.

Mutagenicity

As product: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on available information, aspiration hazard could not be determined.

12. ECOLOGICAL INFORMATION

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

Toxicity**Acute toxicity to fish**

As product:

LC50. *Lepomis macrochirus* (Bluegill sunfish). flow-through test. 96 Hour. > 130 mg/l. OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

Based on information for component(s):

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

Based on information for component(s):

EC50. Midge (*Chironomus riparius*). 48 Hour. > 1 - 10 mg/l. Estimated.

As product:

EC50. *Daphnia magna* (Water flea). 48 Hour. > 100 mg/l. OECD Test Guideline 202 or Equivalent

For the active ingredient(s):

EC50. Midge (*Chironomus riparius*). 48 Hour. 0.257 mg/l

Acute toxicity to algae/aquatic plants

As product:

ErC50. *Pseudokirchneriella subcapitata* (green algae). 96 Hour. Growth rate inhibition. > 100 mg/l. OECD Test Guideline 201 or Equivalent

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

As product:

oral LD50. *Colinus virginianus* (Bobwhite quail). > 2,250 mg/kg

Toxicity to soil-dwelling organisms

LC50. *Eisenia fetida* (earthworms). 14 d. > 1,250 mg/kg

Persistence and degradability**Methoxyfenozide**

Biodegradability: Biodegradation rate may increase in soil and/or water with acclimation.

Stability in Water (1/2-life)

. 802 d. pH 7. Half-life Temperature 25 °C

Ethoxylated Alcohols, C12 to C15

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: > 90 %

Exposure time: 28 d

Method: OECD Test Guideline 301E or Equivalent

10-day Window: Pass

Biodegradation: > 60 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

1,2-Benzisothiazolin-3-one

Biodegradability: Abiotic degradation: The material is rapidly degradable by abiotic means.

Biodegradation: 24 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Bioaccumulative potential**Methoxyfenozide**

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 3.72 at 25 °C OECD Test Guideline 107 or Equivalent

Bioconcentration factor (BCF): 11.0 Fish 28 d Measured

Ethoxylated Alcohols, C12 to C15

Bioaccumulation: No relevant data found.

1,2-Benzisothiazolin-3-one

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

Partition coefficient: n-octanol/water(log Pow): 1.19 OECD Test Guideline 117 or Equivalent

Bioconcentration factor (BCF): 3.2 Fish Calculated.

Mobility in soil**Methoxyfenozide**

Potential for mobility in soil is medium (Koc between 150 and 500).

Ethoxylated Alcohols, C12 to C15

No relevant data found.

1,2-Benzisothiazolin-3-one

Potential for mobility in soil is high (Koc between 50 and 150).

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.

Partition coefficient (Koc): 104 Estimated.

Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Other adverse effects

Product contains no ozone-depleting components.

13. DISPOSAL CONSIDERATIONS

Disposal 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.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Methoxyfenozide)
UN number	UN 3082
Class	9
Packing group	III
Environmental hazards	Methoxyfenozide

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Methoxyfenozide)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Methoxyfenozide
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):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Methoxyfenozide)
UN number	UN 3082
Class	9
Packing group	III

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.

15. REGULATORY INFORMATION

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: E2

200 t

500 t

Classification and labeling have been performed according to Regulation (EC) No 1272/2008.

16. OTHER INFORMATION

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.

Revision

Identification Number: 97070733 / Issue Date: 08/05/2021 / Version: 1.0

DAS Code: GF-837

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

Legend

Dow IHG	Dow Industrial Hygiene Guideline
STEL	Short term exposure limit
TWA	Time weighted average
Acute Tox.	Acute toxicity
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Dam.	Serious eye damage
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization

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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; 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 FRANCE S.A.S. 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.

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