



SAFETY DATA SHEET

Corteva Agriscience RSA Proprietary Limited ("Corteva Agriscience")

Product name: EQUATION® PRO

Issue Date: 03.05.2021

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DuPont de Nemours South Africa (Pty) 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.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: EQUATION® PRO

Recommended use of the chemical and restrictions on use

Identified uses: Fungicide

COMPANY IDENTIFICATION

DuPont de Nemours South Africa (Pty) Ltd
34 Whiteley Road
Melrose Arch
South Africa

Customer Information Number : +27 11 218 8600
E-mail address : SDS@corteva.com

EMERGENCY TELEPHONE

Local Emergency Contact : 027 31 466 2713

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity - Category 4 - Oral - H302
Reproductive toxicity - Category 2 - H361
Specific target organ toxicity - repeated exposure - Category 2 - Oral - H373
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.

Label elements

Hazard pictograms



Signal Word: WARNING

Hazard statements

- H302 Harmful if swallowed.
 H361 Suspected of damaging fertility or the unborn child.
 H373 May cause damage to organs (Eyes) through prolonged or repeated exposure if swallowed.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P201 Obtain special instructions before use.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 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: Cymoxanil. May produce an allergic reaction.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

CASRN / EC-No. / Index-No.	Concentration	Component	Classification
CASRN 57966-95-7 EC-No. 261-043-0 Index-No. 616-035-00-5	30,93%	Cymoxanil	Acute Tox. - 4 - H302 Repr. - 2 - H361 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410 Skin Sens. - 1B - H317 STOT RE - 2 - H373
CASRN 131807-57-3	23,44%	Famoxadone	STOT RE - 2 - H373 Aquatic Acute - 1 - H400

EC-No. — Index-No. 612-206-00-3			Aquatic Chronic - 1 - H410
CASRN 68512-34-5 EC-No. 614-547-3 Index-No. —	>= 20,0 - < 25,0 %	Sodium lignosulfonate, sulfomethylated	Eye Irrit. - 2 - H319
CASRN 1258274-08-6 EC-No. 800-660-7 Index-No. —	>= 3,0 - < 10,0 %	Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts	Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318
CASRN 110-17-8 EC-No. 203-743-0 Index-No. 607-146-00-X	>= 1,0 - < 3,0 %	Fumaric acid	Eye Irrit. - 2 - H319
CASRN 105859-97-0 EC-No. — Index-No. —	>= 1,0 - < 3,0 %	Lignin, Alkali, Reaction Products with Disodium Sulfite and Formaldehyde	Eye Irrit. - 2 - H319
CASRN 7647-14-5 EC-No. 231-598-3 Index-No. —	>= 1,0 - < 3,0 %	Sodium chloride	Not classified

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:

Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air. Consult a physician after significant exposure. Artificial respiration and/or oxygen may be necessary.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.

Eye contact: If easy to do, remove contact lens, if worn. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.

Ingestion: Obtain medical attention. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

Most important symptoms and effects, both acute and delayed:

Eye contact may provoke the following symptoms: Conjunctivitis.

Skin contact may provoke the following symptoms: Local irritation

Inhalation may provoke the following symptoms: Rhinitis

Ingestion may provoke the following symptoms: Gastrointestinal disturbance Diarrhoea Vomiting Nausea

Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

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: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide.

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: 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. 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.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid dust formation. Avoid breathing dust. Use personal protective equipment. 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. 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: Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. Pick up and arrange disposal without creating dust. 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. Sweep up or vacuum up spillage and collect in suitable container for disposal. See Section 13, Disposal Considerations, for additional information.

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

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid formation of respirable particles. Do not breathe vapours/dust. Do not smoke. Handle in accordance with good industrial hygiene and safety practice. Avoid exposure - obtain special instructions before use. Smoking, eating and drinking should be prohibited in the application area. Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Avoid contact with skin and eyes. Keep container tightly closed. 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
Fumaric acid	Dow IHG	TWA	10 mg/m ³
Sodium chloride	Dow IHG	TWA	10 mg/m ³

Exposure controls

Engineering controls: Ensure adequate ventilation, especially in confined areas. Use sufficient ventilation to keep employee exposure below recommended limits.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Dispose of rinse water in accordance with local and national regulations.

Protective measures: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application.

Individual protection measures

Eye/face protection: Safety glasses with side-shields conforming to EN166

Skin protection

Hand protection: The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. 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 suitability for a specific workplace should be discussed with the producers of the protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. 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. The exact break through time can be obtained from the protective glove producer and this has to be observed. Gauntlets shorter than 35 cm long shall be worn under the combination sleeve. Before removing gloves clean them with soap and water.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Manufacturing and processing work: Half mask with a particle filter FFP1 (EN149)

Mixer and loaders must wear: Half mask with a particle filter FFP1 (EN149)

Spray application - outdoor: Tractor / sprayer with hood: No personal respiratory protective equipment normally required.

Tractor / sprayer without hood: Half mask with a particle filter P1 (EN 143).

Backpack / knapsack sprayer: Half mask with a particle filter P1 (EN 143).

Mechanical automatized spray application in closed tunnel: No personal respiratory protective equipment normally required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	granules
Color	brown
Odor	sweet
Odor Threshold	not determined
pH	5 - 7 at 10 g/L
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Does not sustain combustion.
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available

Water solubility	dispersible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	Decomposition under influence of moisture is highly accelerated by heating.
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Bulk density	580 kg/m ³
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: Strong acids Strong bases

Hazardous decomposition products: Hydrogen cyanide (hydrocyanic acid)

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product:

LD50, Rat, 1 333 mg/kg OECD Test Guideline 401

Acute dermal toxicity

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

As product:

LD50, Rabbit, > 5 000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to mist.

As product:

LC50, Rat, male and female, 4 Hour, dust/mist, > 2,7 mg/l

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Essentially nonirritating to eyes.

Sensitization

For skin 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)

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Product test data not available. Refer to component data.

Carcinogenicity

For the active ingredient(s): 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

For the active ingredient(s): 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 in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard

Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

Cymoxanil

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

Blood

Thymus.

Aspiration Hazard

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

Famoxadone

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

Liver
eye effects

Aspiration Hazard

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

Sodium lignosulfonate, sulfomethylated

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For similar material(s):

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Aspiration Hazard

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

Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts

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)

No relevant data found.

Aspiration Hazard

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

Fumaric acid

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)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Aspiration Hazard

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

Sodium chloride

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)

Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

Aspiration Hazard

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

12. ECOLOGICAL INFORMATION

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

Toxicity

Acute toxicity to fish

(Data on the product itself)

Information source: Internal study report

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 0,038 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

(Data on the product itself)

Information source: Internal study report

EC50, Daphnia (water flea), flow-through test, 48 Hour, 0,054 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

As product:

EbC50, Pseudokirchneriella subcapitata (microalgae), 72 Hour, 4,04 mg/l, Directive 67/548/EEC, Annex V, C.3.

As product:

ErC50, Pseudokirchneriella subcapitata (microalgae), 72 Hour, 10,98 mg/l, Directive 67/548/EEC, Annex V, C.3.

Toxicity to Above Ground Organisms

As product:

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

As product:

oral LD50, Apis mellifera (bees), 48 Hour, > 200µg/bee

As product:

contact LD50, Apis mellifera (bees), 48 d, > 200µg/bee

Toxicity to soil-dwelling organisms

As product:

LC50, Eisenia fetida (earthworms), 14 d, 989 mg/kg

Persistence and degradability

Biodegradability: Not readily biodegradable. Estimation based on data obtained on active ingredient.

Bioaccumulative potential

Bioaccumulation: Does not bioaccumulate. Estimation based on data obtained on active ingredient. No data available

Mobility in soil

Cymoxanil

Partition coefficient (Koc): 2,7 - 87,1

Famoxadone

No relevant data found.

Sodium lignosulfonate, sulfomethylated

Expected to be relatively immobile in soil (Koc > 5000).

Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts

No relevant data found.

Fumaric acid

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

Partition coefficient (Koc): 7,33 Estimated.

Lignin, Alkali, Reaction Products with Disodium Sulfite and Formaldehyde

No relevant data found.

Sodium chloride

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

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

Cymoxanil

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

Sodium lignosulfonate, sulfomethylated

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

Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts

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

Fumaric acid

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

Lignin, Alkali, Reaction Products with Disodium Sulfite and Formaldehyde

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

Sodium chloride

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

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, SOLID, N.O.S.(Famoxadone, Cymoxanil)
UN number	UN 3077
Class	9
Packing group	III

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Famoxadone, Cymoxanil)
UN number	UN 3077
Class	9
Packing group	III
Marine pollutant	Famoxadone, Cymoxanil
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, solid, n.o.s.(Famoxadone, Cymoxanil)
UN number	UN 3077
Class	9
Packing group	III

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.

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

Other information

Take notice of the directions of use on the label.

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.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Revision

Identification Number: 011000006597 / Issue Date: 03.05.2021 / Version: 0.0

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
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
Eye Irrit.	Eye irritation
Repr.	Reproductive toxicity
Skin Irrit.	Skin irritation

Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure

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; 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 RSA Proprietary Limited ("Corteva Agriscience RSA") 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.

ZA