

SAFETY DATA SHEET

CORTEVA AGRISCIENCE LLC

Product name: AGIXA™ Herbicide

Issue Date: 01/28/2020

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CORTEVA AGRISCIENCE LLC 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. IDENTIFICATION

Product name: AGIXA™ Herbicide

Recommended use of the chemical and restrictions on use

Identified uses: End use herbicide product

COMPANY IDENTIFICATION

CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number:

800-992-5994

customerinformation@corteva.com

EMERGENCY TELEPHONE

24-Hour Emergency Contact: (800)-992-5994

Local Emergency Contact: 317-337-6009

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Specific target organ toxicity - single exposure - Category 3

Label elements

Hazard pictograms



Signal word: **WARNING!**

Hazards

May cause respiratory irritation.

Precautionary statements**Prevention**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Use only outdoors or in a well-ventilated area.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

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

Other hazards

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).

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Cyhalofop-butyl	122008-85-9	16.9%
Florpyrauxifen-benzyl	1390661-72-9	1.27%
N,N-Dimethyldecan-1-amide	14433-76-2	>= 10.0 - < 20.0 %
Ethylhexanol	104-76-7	>= 1.0 - < 3.0 %
Methanol	67-56-1	>= 0.3 - < 1.0 %
Balance	Not available	> 60.0 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). 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: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

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. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

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: Nitrogen oxides. Hydrogen fluoride. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water

surface spreading fire or contacting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Keep upwind of spill. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

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

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact the company for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

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
Ethylhexanol	Dow IHG	TWA	2 ppm
	Dow IHG	TWA	SKIN
Methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	OSHA Z-1	TWA	260 mg/m3 200 ppm
	ACGIH	TWA	SKIN, BEI
	ACGIH	STEL	SKIN, BEI

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.

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

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).

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. 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. 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.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid.
Color	yellow
Odor	sweet

Odor Threshold	No data available
pH	4.67 <i>pH Electrode</i> 1% Aqueous solution
Melting point/range	Not applicable
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	closed cup > 95.0 °C (> 203.0 °F) <i>EPA OPPTS 830.6315 (Flammability)</i>
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	No data available
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	emulsifies in water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	252 °C (486 °F) <i>EC Method A15</i>
Decomposition temperature	No data available
Kinematic Viscosity	17.4 mm ² /s at 20 °C (68 °F)
Explosive properties	Not explosive <i>EC Method A.14</i>
Oxidizing properties	No <i>EC Method A.21</i>
Liquid Density	0.9474 g/ml at 20 °C (68 °F) <i>Digital density meter</i>
Molecular weight	No data available
Surface tension	29.0 mN/m at 25 °C (77 °F) <i>EC Method A5</i>

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

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Avoid contact with oxidizing materials.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen cyanide. Hydrogen fluoride. Nitrogen oxides. Gases are released during decomposition.

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.

LD50, Rat, female, > 2,000 mg/kg OECD Test Guideline 423

Acute dermal toxicity

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

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

Acute inhalation toxicity

Prolonged exposure is not expected to cause adverse effects.

LC50, Rat, male and female, 4 Hour, Aerosol, > 5.47 mg/l OECD Test Guideline 436 No deaths occurred at this concentration.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight eye irritation.

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)

May cause respiratory irritation.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s):

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

Kidney

Liver

Gall bladder.

For the minor component(s):

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

Blood

spleen

Eye.

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Carcinogenicity

For the active ingredient(s): Did not cause cancer in laboratory animals.

Teratogenicity

Based on information for component(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

For the minor component(s): Has caused birth defects in laboratory animals only at doses toxic to the mother.

Reproductive toxicity

For the active ingredient(s): In animal studies, did not interfere with reproduction.

Mutagenicity

Based on information for component(s): In vitro 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

LC50, Cyprinus carpio (Carp), semi-static test, 96 Hour, 5.09 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 9.02 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, 6.62 mg/l, OECD Test Guideline 201

NOEC, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, 0.585 mg/l, OECD Test Guideline 201

ErC50, Myriophyllum spicatum, 14 d, Biomass, > 0.1 mg/l

EyC50, Myriophyllum spicatum, 14 d, Biomass, 0.00621 mg/l

NOEC, Myriophyllum spicatum, 14 d, Growth rate, 0.000954 mg/l

ErC50, Myriophyllum spicatum, 14 d, Growth rate, 0.00786 mg/l

Toxicity to Above Ground Organisms

LD50, Apis mellifera (bees), 48 Hour, Acute oral toxicity, > 164µg/bee

LD50, Apis mellifera (bees), 48 Hour, Acute contact toxicity, > 300µg/bee

LD50, Colinus virginianus (Bobwhite quail), Acute oral toxicity, 4,211 mg/kg

Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 14 d, mortality, > 1,000 mg/kg

NOEC, Eisenia fetida (earthworms), 14 d, mortality, 1,000 mg/kg

Persistence and degradability

Cyhalofop-butyl

Biodegradability: 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: 40 %

Exposure time: 29 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 1.93 mg/mg

Stability in Water (1/2-life)

, 7 d

Photodegradation

Atmospheric half-life: 5.88 Hour

Method: Measured

Florpyrauxifen-benzyl

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: 14.6 %

Exposure time: 29 d

Method: OECD Test Guideline 301B

Stability in Water (1/2-life)

Hydrolysis, DT50, 913 d, pH 4, Half-life Temperature 25 °C

Hydrolysis, DT50, 111 d, pH 7, Half-life Temperature 25 °C

Hydrolysis, DT50, 1.3 d, pH 9, Half-life Temperature 25 °C

N,N-Dimethyldecan-1-amide

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

10-day Window: Pass

Biodegradation: 66.12 %
Exposure time: 11 d
Method: OECD Test Guideline 301B or Equivalent

Ethylhexanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Not applicable

Biodegradation: > 95 %

Exposure time: 5 d

Method: OECD Test Guideline 302B or Equivalent

10-day Window: Pass

Biodegradation: 68 %

Exposure time: 17 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.95 mg/mg

Chemical Oxygen Demand: 2.70 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	26 - 70 %
10 d	75 - 81 %
20 d	86 - 87 %

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 9.7 Hour

Method: Estimated.

Methanol

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

10-day Window: Pass

Biodegradation: 99 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 1.50 mg/mg

Chemical Oxygen Demand: 1.49 mg/mg Dichromate

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	72 %
20 d	79 %

Photodegradation**Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 8 - 18 d**Method:** Estimated.**Balance****Biodegradability:** No relevant data found.**Bioaccumulative potential****Cyhalofop-butyl****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 3.32 Measured**Bioconcentration factor (BCF):** < 7 Fish 28 d Measured**Florpyrauxifen-benzyl****Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).**Partition coefficient: n-octanol/water(log Pow):** 5.5 at 20 °C**Bioconcentration factor (BCF):** 356 Lepomis macrochirus (Bluegill sunfish) 30 d**N,N-Dimethyldecan-1-amide****Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).**Partition coefficient: n-octanol/water(log Pow):** 3.44 Estimated.**Ethylhexanol****Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).**Partition coefficient: n-octanol/water(log Pow):** 3.1 Measured**Methanol****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** -0.77 Measured**Bioconcentration factor (BCF):** < 10 Fish Measured**Balance****Bioaccumulation:** No relevant data found.**Mobility in soil****Cyhalofop-butyl**

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

Partition coefficient (Koc): 5247 Measured**Florpyrauxifen-benzyl**

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

Partition coefficient (Koc): 34200**N,N-Dimethyldecan-1-amide**

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

Partition coefficient (Koc): 351 - 630

Ethylhexanol

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

Partition coefficient (Koc): 800 Estimated.

Methanol

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

Partition coefficient (Koc): 0.44 Estimated.

Balance

No relevant data found.

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.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Cyhalofop-butyl, Florpyrauxifen-benzyl)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Cyhalofop-butyl, Florpyrauxifen-benzyl
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.(Cyhalofop-butyl, Florpyrauxifen-benzyl)
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

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Specific target organ toxicity (single or repeated exposure)

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Ethylhexanol	104-76-7

California Prop. 65

WARNING: This product can expose you to chemicals including Methanol, N-Methyl-2-pyrrolidone, Toluene, Hexane, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (TSCA)

This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

16. OTHER INFORMATION

Hazard Rating System

NFPA

Health	Flammability	Instability
1	1	0

Revision

Identification Number: 97054999 / A211 / Issue Date: 01/28/2020 / Version: 3.0
DAS Code: GF-3479

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

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
SKIN	Absorbed via skin
SKIN, BEI	Absorbed via Skin, Biological Exposure Indice
STEL	Short-term exposure limit
TWA	8-hour time weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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 LLC 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.

US