



SAFETY DATA SHEET

CORTEVA AGRISCIENCE (MALAYSIA) SDN. BHD.

Product name: CLINCHER™ 100EC Herbicide

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CORTEVA AGRISCIENCE (MALAYSIA) SDN. BHD. 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 OF THE HAZARDOUS CHEMICAL AND OF THE SUPPLIER

Product name: CLINCHER™ 100EC Herbicide

Recommended use of the chemical and restrictions on use

Identified uses: End use herbicide product

COMPANY IDENTIFICATION

CORTEVA AGRISCIENCE (MALAYSIA) SDN. BHD.
B-3-3, THE ASCENT PARADIGM
NO. 1, JALAN SS7/26A, KELANA JAYA
47301 PETALING JAYA
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MALAYSIA

Customer Information Number : 603-7800 0280
E-mail address : SDS@corteva.com

EMERGENCY TELEPHONE

24-Hour Emergency Contact : 999
Local Emergency Contact : 603-7800 0287

2. HAZARDS IDENTIFICATION

GHS Classification

Classified as hazardous according to regulatory criteria.
Carcinogenicity - Category 2
Aspiration hazard - Category 1
Hazardous to the aquatic environment - chronic hazard - Category 2

GHS label elements

Hazard pictograms



Signal Word: **DANGER!**

Hazard statements

May be fatal if swallowed and enters airways.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

Precautionary statements**Prevention**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.
Use personal protective equipment as required.

Response

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
Collect spillage.

Storage

Store locked up.

Disposal

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

Other hazards

No data available

3. COMPOSITION AND INFORMATION OF THE INGREDIENTS OF THE HAZARDOUS CHEMICAL

This product is a mixture.

Component	CASRN	Concentration
Cyhalofop-butyl	122008-85-9	10.0%
Alkylphenol alkoxyate	69029-39-6	50.0%

Heavy aromatic naphtha	64742-94-5	29.1%
Naphthalene	91-20-3	>= 1.5 - <= 2.9 %
Oleic Acid	112-80-1	2.4%
1,2,4-Trimethylbenzene	95-63-6	>= 0.3 - <= 1.5 %
1,3,5-Trimethylbenzene	108-67-8	>= 0.03 - <= 0.3 %
Balance	Not available	>= 3.8 - <= 6.67 %

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. If breathing is difficult, oxygen should be administered by qualified personnel.

Skin contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

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. Suitable emergency eye wash facility should be immediately available.

Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not 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: Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a 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. Skin contact may aggravate preexisting dermatitis.

5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media: No data available

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 trace amounts of: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. 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). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Refer to section 7, Handling, for additional precautionary measures. 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. Spills or discharge to natural waterways is likely to kill aquatic organisms.

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. Keep away from heat, sparks and flame. 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. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. 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
Alkylphenol alkoxyolate	Dow IHG	TWA	2 mg/m ³
Heavy aromatic naphtha	ACGIH	TWA	200 mg/m ³ , total hydrocarbon vapor
	Corteva OEL	TWA	100 mg/m ³
	Corteva OEL	STEL	300 mg/m ³
Naphthalene	ACGIH	TWA	10 ppm
	ACGIH	TWA	SKIN
	Dow IHG	TWA	10 ppm
	Dow IHG	TWA	SKIN
	Dow IHG	STEL	15 ppm
	Dow IHG	STEL	SKIN
	MY PEL	TWA	52 mg/m ³ 10 ppm
1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm
1,3,5-Trimethylbenzene	ACGIH	TWA	25 ppm

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 engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). 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, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. 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	Odorless
Odor Threshold	No test data available
pH	No test data available
Melting point/range	Not applicable
Freezing point	No data available
Boiling point (760 mmHg)	No test data available
Flash point	closed cup 73 °C
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	No data available
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)	0.989 at 20 °C Approximately

Water solubility	emulsifiable
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	No data available
Explosive properties	No
Oxidizing properties	No data available
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: No dangerous reaction known under conditions of normal use.

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with: Strong oxidizers.

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: Nitrogen oxides. Toxic gases are released during decomposition.

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, female, > 5,000 mg/kg OECD Test Guideline 423 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, > 5,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity

Prolonged excessive exposure to mist may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. May cause nausea and vomiting.
As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

May cause moderate eye irritation which may be slow to heal.
May cause slight temporary corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization

For the minor component(s):
Skin contact may cause an allergic skin reaction in a small proportion of individuals.

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:
Gall bladder.
Kidney.
Liver.

Contains component(s) which have been reported to cause effects on the following organs in animals:

Gastrointestinal tract.
Kidney.
Liver.
Thyroid.
Lung.
Urinary tract.

Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.
Ingestion of naphthalene by humans has caused hemolytic anemia.

Carcinogenicity

Contains naphthalene which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

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

Teratogenicity

For the active ingredient(s): 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

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

For the minor component(s): In animal studies, has been shown to interfere with reproduction. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

Mutagenicity

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

Based on information for component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard

May be fatal if swallowed and enters airways.

COMPONENTS INFLUENCING TOXICOLOGY:

Cyhalofop-butyl

Acute inhalation toxicity

Prolonged exposure is not expected to cause adverse effects. Based on the available data, narcotic effects were not observed. Based on the available data, respiratory irritation was not observed.

LC50, Rat, male and female, 4 Hour, dust/mist, > 5.63 mg/l No deaths occurred at this concentration.

Alkylphenol alkoxyolate

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material or mist may cause respiratory irritation and other effects.

As product: The LC50 has not been determined.

Heavy aromatic naphtha

Acute inhalation toxicity

LC50, Rat, 4 Hour, dust/mist, > 4.8 mg/l

LC50, Rat, 4 Hour, vapour, > 0.2 mg/l No deaths occurred following exposure to a saturated atmosphere.

Naphthalene

Acute inhalation toxicity

Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Excessive exposure may cause lung injury. Signs and symptoms of excessive exposure may include: Headache. Confusion. Sweating. Nausea and/or vomiting.

LC50, Rat, 4 Hour, vapour, > 0.41 mg/l The LC50 value is greater than the Maximum Attainable Concentration.

Oleic Acid

Acute inhalation toxicity

Vapors are unlikely due to physical properties. No adverse effects are anticipated from single exposure to mist.

The LC50 has not been determined.

For similar material(s): LC50, Rat, dust/mist, > 5 mg/l Estimated.

1,2,4-Trimethylbenzene

Acute inhalation toxicity

Prolonged excessive exposure may cause serious adverse effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

LC50, Rat, 4 Hour, vapour, 18 mg/l

1,3,5-Trimethylbenzene

Acute inhalation toxicity

LC50, Rat, male and female, 4 Hour, vapour, > 10.2 mg/l No deaths occurred following exposure to a saturated atmosphere.

Balance

Acute inhalation toxicity

The LC50 has not been determined.

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 4.6 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 11 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 9 mg/l

Toxicity to Above Ground Organisms

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

oral LD50, Colinus virginianus (Bobwhite quail), mortality, > 2250mg/kg bodyweight.

oral LD50, Apis mellifera (bees), 48 Hour, mortality, > 103.9micrograms/bee

contact LD50, Apis mellifera (bees), 48 Hour, mortality, 100micrograms/bee

Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 14 d, mortality, 406 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

Alkylphenol alkoxyate

Biodegradability: Biodegradation under aerobic laboratory conditions is below detectable limits (BOD₂₀ or BOD₂₈/ThOD < 2.5%).

Theoretical Oxygen Demand: 2.35 mg/mg

Chemical Oxygen Demand: 1.78 mg/mg

Heavy aromatic naphtha

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Naphthalene

Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD > 40%).

Theoretical Oxygen Demand: 3.00 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	57.000 %
10 d	71.000 %
20 d	71.000 %

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 5.9 Hour

Method: Estimated.

Oleic Acid

Biodegradability: Material is expected to be readily biodegradable.

Theoretical Oxygen Demand: 2.89 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 1.699 d

Method: Estimated.

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 1.544 d

Method: Estimated.

1,2,4-Trimethylbenzene

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

Biodegradation: 100 %

Exposure time: 1 d

Theoretical Oxygen Demand: 3.19 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 0.641 d

Method: Estimated.

1,3,5-Trimethylbenzene

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: Not applicable

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 301C or Equivalent

10-day Window: Not applicable

Biodegradation: 50 %

Exposure time: 4.4 d

Method: Calculated.

Theoretical Oxygen Demand: 3.19 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 3.7 Hour

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

Alkylphenol alkoxyate

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility. May foam in water.

Heavy aromatic naphtha

Bioaccumulation: For similar material(s): Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Naphthalene

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

Partition coefficient: n-octanol/water(log Pow): 3.3 Measured

Bioconcentration factor (BCF): 40 - 300 Fish 28 d Measured

Oleic Acid

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient: n-octanol/water(log Pow): 7.64 Measured

Bioconcentration factor (BCF): 10 Estimated.

1,2,4-Trimethylbenzene

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

Partition coefficient: n-octanol/water(log Pow): 3.63 Measured

Bioconcentration factor (BCF): 33 - 275 Cyprinus carpio (Carp) 56 d Measured

1,3,5-Trimethylbenzene

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

Partition coefficient: n-octanol/water(log Pow): 3.42 Measured

Bioconcentration factor (BCF): 161 Pimephales promelas (fathead minnow) 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

Alkylphenol alkoxyate

No data available.

Heavy aromatic naphtha

No relevant data found.

Naphthalene

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

Partition coefficient (Koc): 240 - 1300 Measured

Oleic Acid

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

Partition coefficient (Koc): 11670 Measured

1,2,4-Trimethylbenzene

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

Partition coefficient (Koc): 720 Estimated.

1,3,5-Trimethylbenzene

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

Partition coefficient (Koc): 741.65 Estimated.

Balance

No relevant data found.

Results of PBT and vPvB assessment

Cyhalofop-butyl

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).

Alkylphenol alkoxylate

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Heavy aromatic naphtha

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Naphthalene

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

1,2,4-Trimethylbenzene

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

1,3,5-Trimethylbenzene

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).

Balance

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Other adverse effects

Cyhalofop-butyl

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

Alkylphenol alkoxylate

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

Heavy aromatic naphtha

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

Naphthalene

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

Oleic Acid

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

1,2,4-Trimethylbenzene

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

1,3,5-Trimethylbenzene

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

Balance

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

13. DISPOSAL INFORMATION

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. TRANSPORTATION INFORMATION

Classification for ROAD and Rail transport:

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Heavy aromatic naphtha, Cyhalofop-butyl)
UN number	UN 3082
Class	9
Packing group	III
Environmental hazards	Heavy aromatic naphtha, Cyhalofop-butyl

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Heavy aromatic naphtha, Cyhalofop-butyl)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Heavy aromatic naphtha, Cyhalofop-butyl
Transport in bulk	Consult IMO regulations before transporting ocean bulk

according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Heavy aromatic naphtha, Cyhalofop-butyl)
UN number	UN 3082
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

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

16. OTHER INFORMATION

Hazard Rating System**NFPA**

Health	Flammability	Instability
1	2	0

Revision

Identification Number: 83080 / Issue Date: 21.05.2021 / Version: 3.2

DAS Code: XGA-2416

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)
Corteva OEL	Corteva Occupational Exposure Limit

Dow IHG	Dow Industrial Hygiene Guideline
MY PEL	Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
SKIN	Absorbed via skin
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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