

Crossbow®

Version **Revision Date:** SDS Number: Date of last issue: -

07/20/2022 800080002887 Date of first issue: 07/20/2022 1.0

Corteva Agriscience™ 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. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Crossbow® Product name

Manufacturer or supplier's details

COMPANY IDENTIFICATION

CORTEVA AGRISCIENCE LLC Manufacturer/importer

9330 ZIONSVILLE RD

INDIANAPOLIS, IN, 46268-1053

UNITED STATES

Customer Information

Number

: 800-992-5994

E-mail address : customerinformation@corteva.com

Emergency telephone INFOTRAC (CONTRACT 84224).

800-992-5994 or 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : End use herbicide product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids Category 4

Acute toxicity (Oral) Category 4

Skin sensitization Sub-category 1B

Specific target organ toxicity

- single exposure

Category 3 (Central nervous system)

Specific target organ toxicity :

Category 2 (Kidney)

- repeated exposure

Aspiration hazard Category 1





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GHS label elements

Hazard pictograms





Signal Word : Danger

Hazard Statements : H227 Combustible liquid.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness.

H373 May cause damage to organs (Kidney) through prolonged

or repeated exposure.

Precautionary Statements : Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces.

No smoking.

P260 Do not breathe mist or vapors.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of

the workplace.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air

and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

P331 Do NOT induce vomiting.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alco-

hol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

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



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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
esters of 2,4-D	1929-73-3	34.4
Triclopyr-2-butoxyethyl ester	64700-56-7	16.5
Kerosine (petroleum), sweetened;	91770-15-9	>= 40 - < 50
Kerosine — unspecified		
Ethylhexanol	104-76-7	>= 1 - < 3
2,4-D (ISO)	94-75-7	>= 0.1 - < 0.3

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

If inhaled : 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 qual-

ified personnel.

In case of 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.

In case of 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 available in

work area.

If swallowed : 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

None known.

Protection of first-aiders

: First Aid responders should pay attention to self-protection

and use the recommended protective clothing (chemical re-

sistant gloves, splash protection).

If potential for exposure exists refer to Section 8 for specific

personal protective equipment.

Notes to physician : Maintain adequate ventilation and oxygenation of the patient.

May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids





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may be of help.

The decision of whether to induce vomiting or not should be

made by a physician.

If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

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.

Repeated excessive exposure may aggravate preexisting lung

disease.

Skin contact may aggravate preexisting dermatitis.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Unsuitable extinguishing

media

Specific hazards during fire

fighting

Do not use direct water stream.

High volume water jet

Exposure to combustion products may be a hazard to health.

Vapors may form explosive mixtures with air.

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

courses.

Flash back possible over considerable distance.

Hazardous combustion prod-

ucts

During a fire, smoke may contain the original material in addi-

tion to combustion products of varying composition which may

be toxic and/or irritating.

Combustion products may include and are not limited to:

Carbon oxides

Nitrogen oxides (NOx) Hydrogen chloride gas

Specific extinguishing meth-

ods

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Further information : Use water spray to cool fire exposed containers and fire af-

fected zone until fire is out and danger of reignition has

passed.

Do not use a solid water stream as it may scatter and spread

fire.

Use a water spray to cool fully closed 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.





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Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

Ensure adequate ventilation.

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.

Prevent spreading over a wide area (e.g., by containment or

oil barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Prevent from entering into soil, ditches, sewers, underwater.

See Section 12, Ecological Information.

Methods and materials for containment and cleaning up

Clean up remaining materials from spill with suitable absorb-

ant

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can

be pumped,

Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-

pressurization of the container.

Keep in suitable, closed containers for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Neutralize with chalk, alkali solution or ammonia.

Non-sparking tools should be used.

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local

/ national regulations (see section 13).

Suppress (knock down) gases/vapors/mists with a water spray

jet.

See Section 13, Disposal Considerations, for additional infor-

mation.

SECTION 7. HANDLING AND STORAGE

Local/Total ventilation

Use with local exhaust ventilation.

Advice on safe handling : Avoid formation of aerosol.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not



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be employed in any process in which this mixture is being

used.

Provide sufficient air exchange and/or exhaust in work rooms.

Do not breathe vapors/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 ap-

plication area.

Do not get on skin or clothing.

Do not breathe vapors or spray mist.

Do not swallow.

Avoid contact with skin and eyes.

Avoid contact with eyes.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

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 : Store in a closed container.

No smoking.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage. Keep in properly labeled containers.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store near acids.

Strong oxidizing agents

Explosives Gases

Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
		exposure)	concentration	
Kerosine (petroleum), sweet- ened; Kerosine — unspecified	91770-15-9	TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
Triclopyr-2-butoxyethyl ester	64700-56-7	TWA	2 mg/m3	Dow IHG
Ethylhexanol	104-76-7	TWA	2 ppm	Corteva OEL
2,4-D (ISO)	94-75-7	TWA (Inhal- able particu- late matter)	10 mg/m3	ACGIH
		TWA	10 mg/m3	OSHA Z-1
		TWA	10 mg/m3	OSHA P0





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Engineering measures : 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 opera-

tions.

Personal protective equipment

Respiratory protection : Respiratory protection should be worn when there is a poten-

tial 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.

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of

preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). 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 reac-

tions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection : Use chemical goggles.

Skin and body 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.

Color : Red to brown

Odor : Sweet

Odor Threshold : No data available

pH : 3.8 (70 °F / 21 °C)

Concentration: 10 % Method: pH Electrode (10% solution in water)

Melting point/range : Not applicable



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Freezing point No data available

Boiling point/boiling range : $> 347 \, ^{\circ}\text{F} / > 175 \, ^{\circ}\text{C}$

(kerosene)

Flash point : 147 °F / 64 °C

Method: Closed Cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : 0.133 hPa (100.0 °F / 37.8 °C)

(kerosene)

Relative vapor density : 4.7

(kerosene)

Relative density : No data available

Density : 1.0114 g/cm3 (68 °F / 20 °C)

Method: Digital density meter

Solubility(ies)

Water solubility : emulsifiable

Autoignition temperature : No data available

Viscosity

Viscosity, dynamic : 6.56 mPa.s (77 °F / 25 °C)

Explosive properties : No

GLP: yes

Oxidizing properties : No data available

SECTION 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 reac-

tions

Stable under recommended storage conditions.

No hazards to be specially mentioned. Vapors may form explosive mixture with air.

May form explosive dust-air mixture.



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Conditions to avoid : Heat, flames and sparks.

Incompatible materials : No

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 oxides

Nitrogen oxides (NOx) Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): 1,000 mg/kg

Method: Estimated.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.19 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg

Components:

esters of 2,4-D:

Acute oral toxicity : LD50 (Rat, female): 831 mg/kg

Remarks: Observations in animals include:

Lethargy. Incoordination.

Acute inhalation toxicity : Remarks: Prolonged excessive exposure to mist may cause

adverse effects.

Based on the available data, respiratory irritation was not ob-

served.

LC50 (Rat, male and female): > 4.6 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Symptoms: The LC50 value is greater than the Maximum

Attainable Concentration.

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit, male): 1,829 mg/kg

Triclopyr-2-butoxyethyl ester:

Acute oral toxicity : LD50 (Rat, male and female): 803 mg/kg



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Acute inhalation toxicity : LC50 (Rat): > 4.8 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Symptoms: The LC50 value is greater than the Maximum

Attainable Concentration.

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Symptoms: No deaths occurred at this concentration.

Assessment: The substance or mixture has no acute dermal

toxicity

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Remarks: Typical for this family of materials.

Acute inhalation toxicity : LC50 (Rat, male): 5.3 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Typical for this family of materials.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Symptoms: No deaths occurred at this concentration.

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Typical for this family of materials.

Ethylhexanol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Target Organs: Central nervous system

Acute inhalation toxicity : LC50 (Rat): 2.17 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg

Method: OECD Test Guideline 402

2,4-D (ISO):

Acute oral toxicity : LD50 (Rat): 639 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 1.79 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Symptoms: No deaths occurred at this concentration.

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg



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Skin corrosion/irritation

Product:

Result : No skin irritation

Components:

Triclopyr-2-butoxyethyl ester:

Species : Rabbit

Result : No skin irritation

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Result : Skin irritation

Ethylhexanol:

Species : Rabbit Result : Skin irritation

2,4-D (ISO):

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Components:

Triclopyr-2-butoxyethyl ester:

Species : Rabbit

Result : No eye irritation

Ethylhexanol:

Species : Rabbit Result : Eye irritation

2,4-D (ISO):

Species : Rabbit Result : Corrosive

Respiratory or skin sensitization

Product:

Assessment : The product is a skin sensitizer, sub-category 1B.

Components:

esters of 2,4-D:

Remarks : Did not cause allergic skin reactions when tested in guinea

pigs.



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Remarks : For respiratory sensitization:

No relevant data found.

Triclopyr-2-butoxyethyl ester:

Species : Guinea pig

Assessment : The product is a skin sensitizer, sub-category 1B.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Remarks : For this family of materials, sensitization studies done in guin-

ea pigs have been negative.

Ethylhexanol:

Test Type : HRIPT (human repeat insult patch test)

Species : human

Assessment : Does not cause skin sensitization.

2,4-D (ISO):

Species : Guinea pig

Result : May cause sensitization by skin contact.

Germ cell mutagenicity

Components:

esters of 2,4-D:

Germ cell mutagenicity - : In vitro genetic toxicity studies were negative., Animal genetic

Assessment toxicity studies were negative.

Triclopyr-2-butoxyethyl ester:

Germ cell mutagenicity - : In vitro genetic toxicity studies were negative., Animal genetic

Assessment toxicity studies were negative.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Germ cell mutagenicity - : In vitro genetic toxicity studies were negative., Animal genetic

Assessment toxicity studies were negative.

Ethylhexanol:

Germ cell mutagenicity - : In vitro genetic toxicity studies were negative., Animal genetic

Assessment toxicity studies were negative.

2,4-D (ISO):

Germ cell mutagenicity - : In vitro genetic toxicity studies were predominantly negative.,

Assessment Animal genetic toxicity studies were predominantly negative.



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Carcinogenicity

Components:

esters of 2,4-D:

Carcinogenicity - Assess-

ment

There is no evidence of carcinogenicity in laboratory animal toxicity studies. While some epidemiological studies report a positive association between 2,4-D exposure and cancer, a weight of evidence analysis of the epidemiology data across studies reveals no indication that 2,4-D causes cancer in humans.

Triclopyr-2-butoxyethyl ester:

Carcinogenicity - Assess-

ment

For similar active ingredient(s)., Triclopyr., Did not cause can-

cer in laboratory animals.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Carcinogenicity - Assess-

ment

In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation.

Ethylhexanol:

Carcinogenicity - Assess-

ment

In laboratory animals, evidence of carcinogenic activity was observed., These is no evidence that these findings are rele-

vant to humans.

2,4-D (ISO):

Carcinogenicity - Assess-

ment

: There is no evidence of carcinogenicity in laboratory animal toxicity studies. While some epidemiological studies report a positive association between 2,4-D exposure and cancer, a

weight of evidence analysis of the epidemiology data across studies reveals no indication that 2,4-D causes cancer in hu-

mans.

IARC Group 2B: Possibly carcinogenic to humans

2,4-D (ISO)

94-75-7

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.



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Reproductive toxicity

Components:

esters of 2,4-D:

Reproductive toxicity - Assessment

For similar active ingredient(s)., 2,4-Dichlorophenoxyacetic acid., In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of off-

spring.

Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory

animals.

Triclopyr-2-butoxyethyl ester:

Reproductive toxicity - Assessment

For similar active ingredient(s)., Triclopyr., In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Reproductive toxicity - As-

sessment

Limited data in laboratory animals suggest that the material

does not affect reproduction.

Did not cause birth defects or any other fetal effects in labora-

tory animals.

Ethylhexanol:

Reproductive toxicity - As-

sessment

Has caused birth defects in laboratory animals only at doses toxic to the mother., Has been toxic to the fetus in laboratory

animals at doses toxic to the mother., These concentrations

exceed relevant human dose levels.

2,4-D (ISO):

Reproductive toxicity - As-

sessment

In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring. Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory

animals.

STOT-single exposure

Product:

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.

Components:

Triclopyr-2-butoxyethyl ester:

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.



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Kerosine (petroleum), sweetened; Kerosine — unspecified:

Assessment : May cause drowsiness or dizziness.

Ethylhexanol:

Routes of exposure : Inhalation

Target Organs : Respiratory Tract

Assessment : May cause respiratory irritation.

2,4-D (ISO):

Routes of exposure : Inhalation

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Components:

Triclopyr-2-butoxyethyl ester:

Target Organs : Kidney

Assessment : May cause damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

Components:

esters of 2,4-D:

Remarks : In animals, effects have been reported on the following or-

gans: Kidney. Liver. Eye. Thyroid.

Triclopyr-2-butoxyethyl ester:

Remarks : In animals, effects have been reported on the following or-

gans: Kidney. Liver.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

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

after exposure to aerosols: Central nervous system.

Respiratory tract.

Observations in animals include: Anesthetic or narcotic effects.



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Ethylhexanol:

Remarks : In animals, effects have been reported on the following or-

gans: Blood. Kidney. Liver. Spleen.

2,4-D (ISO):

Remarks : In animals, effects have been reported on the following or-

gans: Liver. Kidney.

Gastrointestinal tract.

Muscles.

Observations in animals include:

Gastrointestinal irritation.

Vomiting.

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

Components:

esters of 2,4-D:

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

Triclopyr-2-butoxyethyl ester:

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

Kerosine (petroleum), sweetened; Kerosine — unspecified:

May be fatal if swallowed and enters airways.

Ethylhexanol:

May be harmful if swallowed and enters airways.

2,4-D (ISO):

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

esters of 2,4-D:

Toxicity to fish : Remarks: Material is highly toxic to aquatic organisms on an



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acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most

sensitive species tested).

LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.61 mg/l

Exposure time: 96 h Test Type: static test

Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 7.2 - 33 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic

plants

EbC50 (Pseudokirchneriella subcapitata (green algae)): 25

mg/l

End point: Biomass Exposure time: 5 d Test Type: static test

Method: OECD Test Guideline 201 or Equivalent

EbC50 (Lemna minor (duckweed)): 0.576 mg/l

End point: Biomass Exposure time: 5 d Test Type: static test Method: OECD 221.

Toxicity to terrestrial organ-

isms

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

birds on a dietary basis (LC50 > 5000 ppm).

dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5620

mg/kg diet.

oral LD50 (Colinus virginianus (Bobwhite quail)): > 2000

mg/kg bodyweight.

Triclopyr-2-butoxyethyl ester:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.36 mg/l

Exposure time: 96 h

Test Type: flow-through test

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 2.9 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 3.00

mg/l

End point: Growth rate inhibition

Exposure time: 96 h

Method: OECD Test Guideline 201

ErC50 (Myriophyllum spicatum): 0.0473 mg/l

Exposure time: 14 d



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NOEC (Myriophyllum spicatum): 0.00722 mg/l

Exposure time: 14 d

M-Factor (Acute aquatic tox-

icity)

Toxicity to fish (Chronic tox-

icity) Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

10

NOEC (Rainbow trout (Oncorhynchus mykiss)): 0.0263 mg/l

NOEC (Daphnia magna (Water flea)): 1.6 mg/l End point: number of offspring

Exposure time: 21 d

LOEC (Daphnia magna (Water flea)): 5.1 mg/l

End point: number of offspring

Exposure time: 21 d

MATC (Maximum Acceptable Toxicant Level) (Daphnia

magna (Water flea)): 2.9 mg/l End point: number of offspring

Exposure time: 21 d

M-Factor (Chronic aquatic

toxicity)

Toxicity to soil dwelling or-

ganisms

10

LC50 (Eisenia fetida (earthworms)): > 1,042 mg/kg

Exposure time: 14 d

Toxicity to terrestrial organ-

isms

oral LD50 (Colinus virginianus (Bobwhite quail)): 735 mg/kg

bodyweight.

Exposure time: 21 d

dietary LC50 (Colinus virginianus (Bobwhite quail)): 1890

mg/kg diet.

Exposure time: 8 d

oral LD50 (Apis mellifera (bees)): > 110 µg/bee

Exposure time: 48 h End point: mortality

contact LD50 (Apis mellifera (bees)): > 100 µg/bee

Exposure time: 48 h End point: mortality

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Toxicity to fish Remarks: 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).

Material is slightly toxic to fish on an acute basis (LC50 be-

tween 10 and 100 mg/L).

LC50 (Oncorhynchus mykiss (rainbow trout)): 18 - 25 mg/l

Exposure time: 96 h Test Type: semi-static test Method: Method Not Specified. Remarks: For this family of materials:



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LC50 (Danio rerio (zebra fish)): 13.5 mg/l

Exposure time: 48 h

Method: Method Not Specified. Remarks: For this family of materials:

LC50 (Pimephales promelas (fathead minnow)): 18 mg/l

Exposure time: 96 h

Method: Method Not Specified. Remarks: For this family of materials:

Toxicity to daphnia and other

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 1.4 - 21 mg/l

Exposure time: 48 h Test Type: static test

Method: Method Not Specified. Remarks: For this family of materials:

Toxicity to algae/aquatic

plants

(Pseudokirchneriella subcapitata (green algae)): 6.7 - 30 mg/l

Exposure time: 72 h

Method: Method Not Specified. Remarks: For this family of materials:

(Pseudokirchneriella subcapitata (green algae)): 5 - 6.2 mg/l

Exposure time: 96 h

Method: Method Not Specified. Remarks: For this family of materials:

Ethylhexanol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 32 - 37 mg/l

Exposure time: 96 h

LC50 (Fathead minnow (Pimephales promelas)): 28.2 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 35.2 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

EC50 (Daphnia magna (Water flea)): 39 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 11.5

mg/l

End point: Growth rate inhibition

Exposure time: 72 h

Method: OECD Test Guideline 201 or Equivalent

Toxicity to microorganisms : EC50 (Bacteria): 256 - 320 mg/l

Exposure time: 16 h

2,4-D (ISO):

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 133 - 320

mg/l



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Exposure time: 96 h Test Type: static test

LC50 (Poecilia reticulata (guppy)): 8.4 - 70.7 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 25 - 262 mg/l

Exposure time: 48 h Test Type: static test

LC50 (stonefly Pteronarcys californica): 1.6 - 15 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 24.2

mg/

Exposure time: 96 h

EC50 (Lemna gibba): 0.58 mg/l

Exposure time: 14 d

ErC50 (Myriophyllum spicatum): 0.373 mg/l

Exposure time: 14 d

NOEC (Myriophyllum spicatum): 0.0305 mg/l

Exposure time: 14 d

Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 63.4 mg/l

End point: growth Exposure time: 32 d

LOEC (Pimephales promelas (fathead minnow)): 100.9 mg/l

End point: growth Exposure time: 32 d

MATC (Maximum Acceptable Toxicant Level) (Pimephales

promelas (fathead minnow)): 80 mg/l

End point: growth Exposure time: 32 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 46.2 mg/l

End point: number of offspring

Exposure time: 21 d

Toxicity to soil dwelling or-

ganisms

LC50 (Eisenia fetida (earthworms)): 0.0616 mg/cm2

Exposure time: 48 d

NOEC (Eisenia fetida (earthworms)): 50.0 mg/kg

Exposure time: 56 d End point: Other

Method: Other guidelines

GLP: yes



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Toxicity to terrestrial organ-

isms

dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5620

mg/kg diet.

oral LD50 (Anas platyrhynchos (Mallard duck)): > 500 mg/kg

bodyweight.

oral LD50 (Apis mellifera (bees)): 94 micrograms/bee

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

esters of 2,4-D:

Biodegradability : Result: Readily biodegradable.

Remarks: Chemical degradation (hydrolysis) is expected in

the environment.

For similar active ingredient(s).

Material is expected to be readily biodegradable.

Triclopyr-2-butoxyethyl ester:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 18 % Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Remarks: 10-day Window: Fail

Biochemical Oxygen De-

mand (BOD)

0.004 kg/kg

ThOD : 1.39 kg/kg

Stability in water : Test Type: Hydrolysis

Degradation half life (half-life): 8.7 d (25 °C) pH: 7

Photodegradation : Rate constant: 2.3E-11 cm3/s

Method: Estimated.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Biodegradability : Remarks: For this family of materials:

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 biode-

gradable under environmental conditions.

aerobic

Biodegradation: 57.5 % Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent



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Remarks: 10-day Window: Fail

Ethylhexanol:

Biodegradability : Result: Readily biodegradable.

Biodegradation: > 95 % Exposure time: 5 d

Method: OECD Test Guideline 302B or Equivalent

Remarks: 10-day Window: Not applicable

Biodegradation: 68 % Exposure time: 17 d

Method: OECD Test Guideline 301B or Equivalent

Remarks: 10-day Window: Pass

Biochemical Oxygen De-

mand (BOD)

26 - 70 %

Incubation time: 5 d

75 - 81 %

Incubation time: 10 d

86 - 87 %

Incubation time: 20 d

Chemical Oxygen Demand

(COD)

2.70 kg/kg

ThOD : 2.95 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals

Rate constant: 1.32E-11 cm3/s

Method: Estimated.

2,4-D (ISO):

Biodegradability : Remarks: Material is readily biodegradable. Passes OECD

test(s) for ready biodegradability.

Biochemical Oxygen De-

mand (BOD)

65 %

Incubation time: 5 d

66 %

Incubation time: 10 d

85 %

Incubation time: 20 d

Chemical Oxygen Demand

(COD)

1.09 kg/kg

Stability in water : Degradation half life (half-life): 2 - 4 d pH: 5



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Bioaccumulative potential

Components:

esters of 2,4-D:

Partition coefficient: n-

octanol/water

Remarks: Bioconcentration potential is moderate (BCF be-

tween 100 and 3000 or Log Pow between 3 and 5).

log Pow: 4.35 Method: Measured

Triclopyr-2-butoxyethyl ester:

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 110

Partition coefficient: n-

octanol/water

log Pow: 4.62 pH: 7

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

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Partition coefficient: n-

octanol/water

log Pow: 6.1

Method: Measured

Remarks: Bioconcentration potential is high (BCF > 3000 or

Log Pow between 5 and 7).

Ethylhexanol:

Partition coefficient: n-

log Pow: 3.1

octanol/water

Method: Measured

Remarks: Bioconcentration potential is moderate (BCF be-

tween 100 and 3000 or Log Pow between 3 and 5).

2,4-D (ISO):

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 10

Exposure time: 3 d

Partition coefficient: n-

octanol/water

log Pow: -0.83

Method: Measured

Remarks: Bioconcentration potential is low (BCF < 100 or Log

Pow < 3).

Mobility in soil

Components:

esters of 2,4-D:

Distribution among environ-

Remarks: No relevant data found.

mental compartments

Triclopyr-2-butoxyethyl ester:

Distribution among environ- : Remarks: Calculation of meaningful sorption data was not



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mental compartments possible due to very rapid degradation in the soil.

For the degradation product:

Triclopyr.

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

50).

Stability in soil : Test Type: aerobic degradation

Dissipation time: 144 - 1,248 h

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Distribution among environ-

mental compartments

Koc: 5900

Method: Estimated.

Remarks: Expected to be relatively immobile in soil (Koc >

5000).

Ethylhexanol:

Distribution among environ-

mental compartments

Koc: 800

Method: Estimated.

Remarks: Potential for mobility in soil is low (Koc between 500

and 2000).

2,4-D (ISO):

Distribution among environ-

mental compartments

Koc: 5 - 212

Method: Measured

Remarks: Potential for mobility in soil is very high (Koc be-

tween 0 and 50).

Stability in soil : Test Type: Photolysis

Dissipation time: 68 d Method: Estimated.

Test Type: aerobic degradation Dissipation time: 1.7 - 4 d

Method: Measured

Test Type: anaerobic degradation

Dissipation time: 66.2 d Method: Measured

Other adverse effects

Components:

esters of 2,4-D:

Results of PBT and vPvB

assessment

This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

Triclopyr-2-butoxyethyl ester:

Results of PBT and vPvB

assessment

This substance is not considered to be persistent, bioaccumu-

lating and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list





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of substances that deplete the ozone layer.

Kerosine (petroleum), sweetened; Kerosine — unspecified:

Results of PBT and vPvB

assessment

: This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

Ethylhexanol:

Results of PBT and vPvB

assessment

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).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

2,4-D (ISO):

Results of PBT and vPvB

assessment

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).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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 regu-

lations.

If the material as supplied becomes a waste, follow all appli-

cable regional, national and local laws.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(2,4-D Ester, Triclopyr-2-butoxyethyl ester)



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Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(2,4-D Ester, Triclopyr-2-butoxyethyl ester)

Class : 9 Packing group : III

Labels : Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen- : 96

ger aircraft)

IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

964

(2,4-D Ester, Triclopyr-2-butoxyethyl ester)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Remarks : Stowage category A

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(Kerosene)

Class : CBL
Packing group : III
Labels : NONE
ERG Code : 128
Marine pollutant : no

Reportable Quantity : 2,4-D Ester only regulated in pack sizes > 132 kg

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 5L 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.

THE ABOVE INFORMATION ONLY APPLIES TO PACKAGE SIZES WHERE THE HAZARDOUS SUBSTANCE MEETS THE REPORTABLE QUANTITY.

Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters). If transporting by vessel or aircraft, unless other means of transportation is impracticable, then the product must be shipped as a flammable liquid.



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Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)

Acute toxicity (any route of exposure) Respiratory or skin sensitization

Specific target organ toxicity (single or repeated exposure)

Aspiration hazard

SARA 313 : The following components are subject to reporting levels es-

tablished by SARA Title III, Section 313:

esters of 2,4-D 1929-73-3 >= 30 - < 50 %

Triclopyr-2- 64700-56-7 >= 10 - < 20 %

butoxyethyl ester

ethylene glycol 111-76-2 >= 0.1 - < 1 %

monobutyl ether

2,4-D (ISO) 94-75-7 >= 0.1 - < 1 %

2-Butoxyethyl 5330-17-6 < 0.1 %

Chloroacetate

US State Regulations

Pennsylvania Right To Know

esters of 2,4-D 1929-73-3 Triclopyr-2-butoxyethyl ester 64700-56-7 Ethylhexanol 104-76-7

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule: Triclopyr Ethyl Ester: 3,5,6-Trichloro-2-pyridinyloxyacetic 60825-27-6 acid, ethyl ester

No substances are subject to TSCA 12(b) export notification requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number : 62719-260



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This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if swallowed

Causes moderate eye irritation

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SECTION 16. OTHER INFORMATION

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.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
Corteva OEL : Corteva Occupational Exposure Limit
Dow IHG : Dow Industrial Hygiene Guideline

OSHA PO : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

Corteva OEL / TWA : Time weighted average

Dow IHG / TWA : Time Weighted Average (TWA): OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; 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 Develop-



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ment; 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; TECI - Thailand Existing Chemicals 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

Revision Date : 07/20/2022

Product code: XRM-4715

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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