

SAFETY DATA SHEET

DOW AGROSCIENCES LLC

Product name: TERRAVUE™ Herbicide

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DOW AGROSCIENCES 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: TERRAVUE™ Herbicide

Recommended use of the chemical and restrictions on use

Identified uses: End use herbicide product

COMPANY IDENTIFICATION

DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number:

800-992-5994
info@corteva.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-992-5994

Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CASRN	Concentration
Aminopyralid Potassium	566191-87-5	70.01%

florpyrauxifen-benzyl	1390661-72-9	6.0%
Kaolin	1332-58-7	>= 3.0 - < 10.0 %
amino-chloro-pyridine-carboxylic acid	Trade Secret	>= 1.0 - < 3.0 %
Balance	Not available	< 20.0 %

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: No emergency medical treatment necessary.

Skin contact: Wash off with plenty of water.

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

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

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.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard.

Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. 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. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. Dust explosion hazard may result from forceful application of fire extinguishing agents. Move container from fire area if this is possible without hazard. 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. Refer to section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. No smoking in area. 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: Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences 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 dust or mist. Good housekeeping and controlling of dusts are necessary for safe handling of product. 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. 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. 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
Kaolin	ACGIH	TWA Respirable fraction	2 mg/m ³
	OSHA Z-1	TWA total dust	15 mg/m ³
	OSHA Z-1	TWA respirable fraction	5 mg/m ³
amino-chloro-pyridine-carboxylic acid	ACGIH	TWA	10 mg/m ³
	OSHA Z-1	TWA total dust	15 mg/m ³
	OSHA Z-1	TWA respirable fraction	5 mg/m ³

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. 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: 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, 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, in dusty atmospheres, use an approved particulate 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** Solid.**Color** tan**Odor****Odor Threshold** No data available**pH** 9.83 *pH Electrode***Melting point/range** No data available**Freezing point** Not applicable**Boiling point (760 mmHg)** Not applicable**Flash point** **closed cup** Not applicable**Evaporation Rate (Butyl Acetate = 1)** Not applicable**Flammability (solid, gas)** No data available**Lower explosion limit** Not applicable**Upper explosion limit** Not applicable**Vapor Pressure** Not applicable**Relative Vapor Density (air = 1)** Not applicable**Relative Density (water = 1)** No data available**Water solubility** No data available**Partition coefficient: n-octanol/water** No data available**Auto-ignition temperature** Not applicable**Decomposition temperature** No test data available**Dynamic Viscosity** Not applicable**Kinematic Viscosity** No data available**Explosive properties** No data available**Oxidizing properties** No significant increase (>5C) in temperature.**Liquid Density** 0.5962 g/ml**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 recommended temperatures and pressures.**Possibility of hazardous reactions:** Polymerization will not occur.

Conditions to avoid: Product decomposes above melting temperature. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: None known.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. 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

Acute dermal toxicity

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

As product:

LD50, Rat, female, > 5,000 mg/kg

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to dust.

As product:

LC50, Rat, male and female, 4 Hour, dust/mist, > 5.46 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation

May cause slight eye irritation.

Sensitization

For skin sensitization:

Did not demonstrate the potential for contact allergy in mice.

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 similar active ingredient(s).

Aminopyralid.

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

Gastrointestinal tract.

For the minor component(s):

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

Liver

Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

Carcinogenicity

For similar active ingredient(s). Aminopyralid. Did not cause cancer in laboratory animals.

Teratogenicity

For similar active ingredient(s). Aminopyralid. Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity

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

Mutagenicity

For similar active ingredient(s). Aminopyralid. In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

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

12. ECOLOGICAL INFORMATION

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

Toxicity

Aminopyralid Potassium

Acute toxicity to fish

For similar active ingredient(s).

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).

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), 48 Hour, > 100 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Algae, 72 Hour, 100 mg/l

Based on information for a similar material:

ErC50, *Myriophyllum spicatum*, 14 d, 0.363 mg/l

Based on information for a similar material:

NOEC, *Myriophyllum spicatum*, 14 d, 0.0639 mg/l

Toxicity to Above Ground Organisms

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

Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).

florpyrauxifen-benzyl**Acute toxicity to fish**

No toxicity at the limit of solubility

The LC50 value is above the water solubility.

LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, > 1 mg/l

The LC50 value is above the water solubility.

LC50, *Cyprinodon variegatus* (sheepshead minnow), 96 Hour, > 0.0403 mg/l

Acute toxicity to aquatic invertebrates

The EC50 value is above the water solubility.

EC50, *Daphnia magna* (Water flea), 48 Hour, > 0.0623 mg/l

Acute toxicity to algae/aquatic plants

Material is very highly toxic to some aquatic vascular plant species.

The EC50 value is above the water solubility.

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate inhibition, > 1 mg/l

ErC50, *Myriophyllum spicatum*, 14 d, 0.000154 mg/l

NOEC, *Myriophyllum spicatum*, 14 d, 0.0000095 mg/l

Toxicity to bacteria

EC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD Test Guideline 209

Chronic toxicity to fish

NOEC, *Pimephales promelas* (fathead minnow), static test, 33 d, 0.0370 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia magna* (Water flea), 21 d, 0.0378 mg/l

Toxicity to Above Ground Organisms

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).

oral LD50, *Colinus virginianus* (Bobwhite quail), mortality, > 2000mg/kg bodyweight.

dietary LC50, *Anas platyrhynchos* (Mallard duck), > 5620mg/kg diet.

oral LD50, *Apis mellifera* (bees), 48 Hour, mortality, > 105.4µg/bee

contact LD50, *Apis mellifera* (bees), 48 Hour, mortality, > 100µg/bee

Toxicity to soil-dwelling organisms

LC50, *Eisenia fetida* (earthworms), 14 d, > 2,000 mg/kg

Kaolin**Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

amino-chloro-pyridine-carboxylic acid**Acute toxicity to fish**

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).

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 8.8 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), 48 Hour, 44.2 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 78.7 mg/l

EC50, Lemna gibba, Growth inhibition, 14 d, 102 mg/l

ErC50, Myriophyllum spicatum, 14 d, 0.558 mg/l

NOEC, Myriophyllum spicatum, 14 d, 0.0095 mg/l

Toxicity to bacteria

EC50, activated sludge, 3 Hour, > 100 mg/l

Chronic toxicity to fish

Rainbow trout (Oncorhynchus mykiss), flow-through test, 70 d, 0.55 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), static test, 21 d, number of offspring, 6.79 mg/l

LOEC, Daphnia magna (Water flea), static test, 21 d, number of offspring, 13.5 mg/l

MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), static test, 21 d, number of offspring, 9.57 mg/l

Toxicity to Above Ground Organisms

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).

oral LD50, Anas platyrhynchos (Mallard duck), 14 d, > 2510mg/kg bodyweight.

dietary LC50, Anas platyrhynchos (Mallard duck), > 5000mg/kg diet.

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

oral LD50, Apis mellifera (bees), 48 d, > 74micrograms/bee

Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 14 d, survival, > 5,000 mg/kg

Balance**Acute toxicity to fish**

No relevant data found.

Persistence and degradability**Aminopyralid Potassium**

Biodegradability: For similar active ingredient(s). Aminopyralid. 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: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

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

Kaolin**Biodegradability:** Biodegradation is not applicable.**amino-chloro-pyridine-carboxylic acid****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. Biodegradation may occur under aerobic conditions (in the presence of oxygen). Surface photodegradation is expected with exposure to sunlight.

10-day Window: Fail

Biodegradation: 1.95 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301**Stability in Water (1/2-life)**

Hydrolysis, half-life, > 1.8 year, pH 5 - 9, Half-life Temperature 45 °C, Measured

Photodegradation**Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 12.5 Hour**Balance****Biodegradability:** No relevant data found.**Bioaccumulative potential****Aminopyralid Potassium****Bioaccumulation:** For similar active ingredient(s). Aminopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**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**Kaolin****Bioaccumulation:** Partitioning from water to n-octanol is not applicable.**amino-chloro-pyridine-carboxylic acid****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** -1.92**Bioconcentration factor (BCF):** 0.54 *Lepomis macrochirus* (Bluegill sunfish)**Balance****Bioaccumulation:** No relevant data found.

Mobility in soil**Aminopyralid Potassium**

For similar active ingredient(s).

Aminopyralid.

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

florpyrauxifen-benzyl

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

Partition coefficient (Koc): 34200

Kaolin

No relevant data found.

amino-chloro-pyridine-carboxylic acid

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

Partition coefficient (Koc): 35

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, SOLID, N.O.S.(Florpyrauxifen-benzyl, Aminopyralid Potassium)
UN number	UN 3077
Class	9
Packing group	III
Marine pollutant	Florpyrauxifen-benzyl, Aminopyralid Potassium
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Florpyrauxifen-benzyl, Aminopyralid Potassium)
UN number	UN 3077
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

No SARA Hazards

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

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CASRN
amino-chloro-pyridine-carboxylic acid	Trade Secret

Pennsylvania Right To Know

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

Components	CASRN
Kaolin	1332-58-7
amino-chloro-pyridine-carboxylic acid	Trade Secret

California Prop. 65

WARNING: This product can expose you to chemicals including Kaolin, which is/are known to the State of California to cause cancer, and Toluene, 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
0	2	0

Revision

Identification Number: 97071444 / A211 / Issue Date: 02/07/2019 / Version: 2.0

DAS Code: GF-3886

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)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
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.

DOW AGROSCIENCES 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