

Product name: Questar™ Fungicide**Issue Date:** 13.03.2020

Dow AgroSciences* (NZ) Ltd encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Questar™ Fungicide
Identified uses: End use fungicide product

COMPANY IDENTIFICATION

DOW AGROSCIENCES (NZ) LIMITED
89 PARITUTU ROAD
4342 NEW PLYMOUTH
NEW ZEALAND

Customer Information Number: 0800-803-939
NZCustomerService@Corteva.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: +64 6 751 2407
Local Emergency Contact: 0800 844 455

For medical advice, contact the New Zealand Poisons Information Centre:
0800 POISON (0800 764766)
Transport Emergency Only Dial 111

This SDS does not provide exhaustive guidance for all the HSNO controls assigned to this substance. The EPA website <http://www.epa.govt.nz> should be consulted for a full list of triggered controls and cited regulations.

2. HAZARDS IDENTIFICATION

GHS Classification

NEW ZEALAND HAZARDOUS SUBSTANCES CLASSIFICATION: Classified as hazardous according to criteria in the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Notice 2017, and the Hazardous Substances (Classification) Notice 2017. Refer to Section 15 for HSNO Approval Number.

HSNO Classification:

3.1D, 6.1E, 6.3B, 6.4A, 6.9B, 9.1A

GHS label elements

Hazard pictograms



Signal word: **DANGER!**

Hazard statements

Combustible liquid.
May be harmful if swallowed.
Causes mild skin irritation.
Causes serious eye irritation.
May be harmful if inhaled.
May cause damage to organs (Liver) through prolonged or repeated exposure if swallowed.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/ physician.
Specific treatment (see supplemental first aid instructions on this label).
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
Collect spillage.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Fenpicoxamid	517875-34-2	>= 2.5 - < 10.0 %
Benzyl acetate	140-11-4	>= 30.0 - < 50.0 %
Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide	Not available	>= 10.0 - < 20.0 %
Cyclohexanone	108-94-1	>= 1.0 - < 10.0 %
Ethoxylated Alcohols, C12 to C15	78330-21-9	>= 2.5 - < 10.0 %
Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt	Not available	>= 2.5 - < 10.0 %

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. Consult the National Poisons Information Centre (0800 POISON (0800 764 766)) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately.

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. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Suitable emergency safety shower facility should be available in work area.

Eye contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. 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: May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, 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.

5. FIREFIGHTING MEASURES

Hazchem code: •2X

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 and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

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

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, trousers, boots, and gloves). 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: Evacuate area. Refer to section 7: Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Only trained and properly protected personnel must be involved in clean-up operations. Keep upwind of spill. Ventilate area of leak or spill. 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: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Corteva Agriscience for clean-up assistance. See Section 13: Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat, sparks and flame. Keep out of reach of children. Do not swallow. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapour or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapours. 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. This substance is subject to a requirement for an emergency management plan, secondary containment and signage, whenever it is held in quantities of 100 L or more, either alone or in aggregate with other hazardous substances. See Hazardous Substances Emergency Management and Identification Regulations.

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
Benzyl acetate	ACGIH	TWA	10 ppm
Cyclohexanone	ACGIH	TWA - SKIN	20 ppm
	ACGIH	STEL - SKIN	50 ppm
	NZ OEL	WES-TWA SKIN	100 mg/m ³ 25 ppm
Ethylhexanol	Dow IHG	TWA - SKIN	2 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.

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Cyclohexanone	108-94-1	1,2-Cyclohexanediol	Urine	End of shift at end of workweek	80 mg/l	ACGIH BEI
		Cyclohexanol	Urine	End of shift (As soon as possible after exposure ceases)	8 mg/l	ACGIH BEI

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.

Skin protection

Hand protection: Use chemical resistant gloves classified under standard AS/NZS 2161.10:

Protective gloves against chemicals and micro-organisms. 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. When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to AS/NZS 2161.10) is recommended. 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. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

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

Other Information: Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:

AS/NZS 1336: Eye and face protection – Guidelines.

AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.

AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.

AS/NZS 2161: Occupational protective gloves.

AS/NZS 2210: Occupational protective footwear.

AS/NZS 4501: Occupational protective clothing Set

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid.
Colour	Clear, light yellow
Odour	Fruity
Odour Threshold	No data available
pH	4.35 <i>pH Electrode</i> 1% solution
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	80.5 °C <i>Pensky-Martens Closed Cup ASTM D 93</i>
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Water solubility	emulsifies in water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	382 °C <i>EC Method A15</i>
Decomposition temperature	No data available
Dynamic Viscosity	7.52 mPa.s at 20 °C <i>OECD Test Guideline 114</i>
Kinematic Viscosity	4.53 mm ² /s at 40 °C
Explosive properties	Not explosive <i>EC Method A.14</i>
Oxidizing properties	No <i>EC Method A.21</i>
Molecular weight	Not applicable

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.

Incompatible materials: Avoid contact with: Acids. Bases. Reducing agents. 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: Carbon monoxide. Carbon dioxide. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity

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

As product: Single dose oral LD50 has not been determined. Based on information for component(s):
LD50, Rat, 2,300 mg/kg Estimated.

Acute dermal toxicity

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

As product: The dermal LD50 has not been determined. Based on information for component(s):
LD50, Rat, 4,800 mg/kg Estimated.

Acute inhalation toxicity

Prolonged excessive exposure to mist may cause adverse effects. Vapor concentrations are attainable which could be hazardous on single exposure. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause moderate skin irritation with local redness.

Prolonged contact may cause severe skin irritation with local redness and discomfort.

Serious eye damage/eye irritation

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization

For the active ingredient(s): Did not demonstrate the potential for contact allergy in mice.

For the solvent(s): Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

Route of Exposure: Inhalation

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s): In animals, effects have been reported on the following organs: Liver. Kidney.

Based on information for component(s): In animals, effects have been reported on the following organs: Blood. Kidney. Liver. Spleen. Central nervous system.

Carcinogenicity

For the active ingredient(s): Did not cause cancer in laboratory animals. For the minor component(s): In laboratory animals, evidence of carcinogenic activity was observed. The observed tumours do not appear to be relevant for men.

Teratogenicity

For the active ingredient(s): Did not cause birth defects or any other foetal effects in laboratory animals.

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

Reproductive toxicity

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

For the minor component(s): Cyclohexanone caused reduced growth and survival of offspring in an animal reproduction study. Dose levels producing this effect also caused central nervous system effects in parental animals. In animal studies, has been shown to interfere with reproduction in males. Effects have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity

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

For the minor component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were inconclusive

Aspiration Hazard

May be harmful if swallowed and enters airways.

COMPONENTS INFLUENCING TOXICOLOGY:

Fenpicoxamid

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to dust. Based on the available data, respiratory irritation was not observed.

Maximum attainable concentration. LC50, Rat, male and female, 4 Hour, dust/mist, > 0.53 mg/l. No deaths occurred at this concentration.

Benzyl acetate

Acute inhalation toxicity

LC0, Rat, male and female, 4 Hour, > 0.766 mg/l OECD Test Guideline 403. No deaths occurred at this concentration.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide**Acute inhalation toxicity**

Prolonged excessive exposure to mist may cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat).

LC50, Rat, 4 Hour, dust/mist, > 3.551 mg/l

Cyclohexanone**Acute inhalation toxicity**

Vapour concentrations are attainable which could be hazardous on single exposure. May cause central nervous system effects. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs.

LC50, Rat, 4 Hour, vapour, > 6.2 mg/l No deaths occurred at this concentration.

Ethoxylated Alcohols, C12 to C15**Acute inhalation toxicity**

Vapour may cause irritation of the upper respiratory tract (nose and throat). Mist may cause irritation of upper respiratory tract (nose and throat).

Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt**Acute inhalation toxicity**

Prolonged excessive exposure to dust may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

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**

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 0.078 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

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

EC50, Daphnia magna (Water flea), static test, 48 Hour, 0.048 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 30 mg/l, OECD Test Guideline 201

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2,000 mg/kg).

Oral LD50, Colinus virginianus (Bobwhite quail), > 2000mg/kg bodyweight.

Contact LD50, Apis mellifera (bees), 48 Hour, 53.4µg/bee

Oral LD50, Apis mellifera (bees), 48 Hour, > 205.6µg/bee

Persistence and degradability

Fenpicoxamid

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

10-day Window: Fail

Biodegradation: 12.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Stability in Water (1/2-life)

Hydrolysis, DT50, 7.1 d, pH 4

Hydrolysis, DT50, 0.92 d, pH 7

Hydrolysis, DT50, 0.024 d, pH 9

Benzyl acetate

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

10-day Window: Pass

Biodegradation: 100 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

10-day Window: Not applicable

Biodegradation: 92 - 96 %

Exposure time: 28 d

Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 2.24 mg/mg

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide

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

10-day Window: Pass

Biodegradation: > 80 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Chemical Oxygen Demand: 2.890 mg/g

Cyclohexanone

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

10-day Window: Not applicable

Biodegradation: 87 %

Exposure time: 14 d

Method: OECD Test Guideline 301C or Equivalent

10-day Window: Pass

Biodegradation: 90 - 100 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Theoretical Oxygen Demand: 2.61 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 10.6 Hour

Method: Estimated.

Ethoxylated Alcohols, C12 to C15

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

10-day Window: Pass

Biodegradation: > 90 %

Exposure time: 28 d

Method: OECD Test Guideline 301E or Equivalent

10-day Window: Pass

Biodegradation: > 60 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt

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

10-day Window: Pass

Biodegradation: 100 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Bioaccumulative potential

Fenpicoxamid

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3,000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water (log Pow): 4.4 at 20 °C

Benzyl acetate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water (log Pow): 1.96 Measured

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3,000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water (log Pow): <3.44 at 20 °C

Cyclohexanone

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water (log Pow): 0.81 Measured

Ethoxylated Alcohols, C12 to C15

Bioaccumulation: No relevant data found.

Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3,000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 2.89

Bioconcentration factor (BCF): 2 - 1,000

Mobility in Soil

Fenpicoxamid

Expected to be relatively immobile in soil (Koc > 5,000).

Partition coefficient (Koc): > 5,000

Benzyl acetate

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

Partition coefficient (Koc): 277 Estimated.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide

Potential for mobility in soil is low (Koc between 500 and 2,000).

Partition coefficient (Koc): 527.3

Cyclohexanone

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

Partition coefficient (Koc): 15 Estimated.

Ethoxylated Alcohols, C12 to C15

No relevant data found.

Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt

No relevant data found.

Results of PBT and vPvB assessment

Fenpicoxamid

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).

Benzyl acetate

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

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide

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).

Cyclohexanone

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).

Ethoxylated Alcohols, C12 to C15

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).

Ethylhexanol

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).

Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt

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).

Other adverse effects

Fenpicoxamid

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

Benzyl acetate

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

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide

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

Cyclohexanone

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

Ethoxylated Alcohols, C12 to C15

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

Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt

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

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Waste handling, treatment and disposal practices must be in compliance with the New Zealand Hazardous Substances (Disposal) Notice 2017. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Regulations concerning waste management may vary in different locations.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fenpicoxamid)
UN number	UN 3082
Class	9
Packing group	III
Environmental hazards	Fenpicoxamid

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fenpicoxamid)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Fenpicoxamid
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fenpicoxamid)
UN number	UN 3082
Class	9
Packing group	III

Hazchem code: •2X

Matters needing attention for transportation:

Marine Pollutants 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 and IATA special provision A197. If the product meets these special provisions, it may be shipped in New Zealand as a non-dangerous goods under provisions in NZS 5433 code which accepts IMDG and IATA classification.

This information is not intended to convey all specific regulatory or operational requirements/ information relating to this product. 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

ACVMG Approval Number: P9656

HSNO Approval Number: HSR101401

HSNO Controls

ADVICE TO PRODUCT USERS REGARDING HSNO CONTROLS: Users of this product should make reference to the New Zealand Hazardous Substances and New Organisms Act and Regulations for relevant risk management controls. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Refer to Environment Protection Authority publication; User Guide to the HSNO Controls Regulations. <http://www.epa.govt.nz>

16. OTHER INFORMATION

Revision

Identification Number: / A157 / Issue Date: 13.03.2020 / Version: Original

DAS Code: GF-3308

Section amended: All

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
Dow IHG	Dow Industrial Hygiene Guideline
NZ OEL	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
SKIN	Absorbed via skin
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average
WES-TWA	Workplace Exposure Standard - Time Weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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; IECS - 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

DOW AGROSCIENCES (NZ) LIMITED 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.

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