

**Product Name:** BROADWAY (TM) STAR 85 WG Herbicide

**Revision Date:** 2014/05/29

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Dow AgroSciences Limited encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## Section 1. Identification of the substance/preparation and of the company/undertaking

### 1.1 Product identifiers

**Product Name**

BROADWAY™ STAR 85 WG Herbicide

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses**

Plant Protection Product

### 1.3 Details of the supplier of the safety data sheet

**COMPANY IDENTIFICATION**

Dow AgroSciences Limited  
A Subsidiary of The Dow Chemical Company  
Latchmore Court, Brand Street  
SG5 1NH Hitchin  
United Kingdom

[SDSQuestion@dow.com](mailto:SDSQuestion@dow.com)

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:**

0031 115 694 982

**Local Emergency Contact:**

00 31 115 69 4982

## Section 2. Hazards Identification

### 2.1 Classification of the substance or mixture

**Classification - REGULATION (EC) No 1272/2008**

Acute aquatic toxicity	Category 1	H400	Very toxic to aquatic life.
Chronic aquatic toxicity	Category 1	H410	Very toxic to aquatic life with long lasting effects.

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

N

R50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2 Label elements****Labelling - REGULATION (EC) No 1272/2008****Hazard pictograms****Signal Word: Warning****Hazard statements:****H410 Very toxic to aquatic life with long lasting effects.****Precautionary Statements:****P391** Collect spillage.**P501** Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.**EUH401** To avoid risks to human health and the environment, comply with the instructions for use.**EUH208** Contains Pyroxsulam and Cloquintocet-mexyl. May produce an allergic reaction.**2.3 Other Hazards**

No information available.

<b>Section 3. Composition/information on ingredients</b>
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**3.2 Mixture**

This product is a mixture.

<b>CAS-No. / EC-No. / REACH No. Index</b>	<b>Amount</b>	<b>Component</b>	<b>Classification: REGULATION (EC) No 1272/2008</b>
<b>CAS-No.</b> 422556-08-9 <b>EC-No.</b> Not available	— 7.1 %	Pyroxsulam	Skin Sens., 1B, H317 Aquatic Acute, 1, H400
<b>CAS-No.</b> 99607-70-2 <b>EC-No.</b> Not available	— 7.1 %	Cloquintocet-mexyl	Skin Sens., 1, H317 Aquatic Acute, 1, H400 Aquatic Chronic, 1, H410
<b>CAS-No.</b> 145701-23-1 <b>EC-No.</b> Not available <b>Index</b> 613-230-00-7	— 1.4 %	Florasulam (ISO)	Aquatic Acute, 1, H400 Aquatic Chronic, 1, H410
<b>CAS-No.</b> 1332-58-7 <b>EC-No.</b> 310-194-1	— > 30.0 - < 40.0 %	Kaolin#	Not classified
<b>CAS-No.</b> 8061-51-6	— > 10.0 - < 20.0 %	Sodium lignosulfonate##	Not classified

<b>EC-No.</b> Polymer				
<b>CAS-No.</b> 77-92-9 <b>EC-No.</b> 201-069-1	—	< 10.0 %	Citric acid	Eye cor/irr, 2, H319
<b>CAS-No.</b> 371-47-1 <b>EC-No.</b> 206-738-1	—	< 1.0 %	Disodium maleate	Skin Irrit., 2, H315 Eye Irrit., 2, H319 STOT SE, 3, H335
<b>CAS-No.</b> 14808-60-7 <b>EC-No.</b> 238-878-4	—	< 1.0 %	Silica, crystalline (quartz)#	Not classified
<b>CAS-No.</b> 13463-67-7 <b>EC-No.</b> 236-675-5	—	< 1.0 %	Titanium dioxide#	Not classified

<b>CAS-No. / EC-No. / Index</b>	<b>Amount</b>	<b>Component</b>	<b>Classification: 67/548/EEC</b>
<b>CAS-No.</b> 422556-08-9 <b>EC-No.</b> Not available	7.1 %	Pyroxsulam	R43; N: R50, R53
<b>CAS-No.</b> 99607-70-2 <b>EC-No.</b> Not available	7.1 %	Cloquintocet-mexyl	R43; N: R50, R53
<b>CAS-No.</b> 145701-23-1 <b>EC-No.</b> Not available <b>Index</b> 613-230-00-7	1.4 %	Florasulam (ISO)	N: R50, R53
<b>CAS-No.</b> 1332-58-7 <b>EC-No.</b> 310-194-1	> 30.0 - < 40.0 %	Kaolin#	Not classified.
<b>CAS-No.</b> 8061-51-6 <b>EC-No.</b> Polymer	> 10.0 - < 20.0 %	Sodium lignosulfonate##	Not classified.
<b>CAS-No.</b> 77-92-9 <b>EC-No.</b> 201-069-1	< 10.0 %	Citric acid	Xi: R36
<b>CAS-No.</b> 371-47-1	< 1.0 %	Disodium maleate	Xi: R36/37/38

**EC-No.**  
206-738-1

**CAS-No.** < 1.0 % Silica, crystalline (quartz)# Not classified.  
14808-60-7

**EC-No.**  
238-878-4

**CAS-No.** < 1.0 % Titanium dioxide# Not classified.  
13463-67-7

**EC-No.**  
236-675-5

# Substance(s) with an Occupational Exposure Limit.

## Voluntarily disclosed component(s).

For the full text of the H-Statements mentioned in this Section, see Section 16.

See Section 16 for full text of R-phrases.

## Section 4. First-aid measures

### 4.1 Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

**Skin Contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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

**Ingestion:** No emergency medical treatment necessary.

### 4.2 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.

### 4.3 Indication of immediate medical attention and special treatment needed

May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

## Section 5. Fire Fighting Measures

### 5.1 Extinguishing Media

Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

### 5.2 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: Sulfur oxides. Nitrogen oxides. Hydrogen fluoride. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate.

### 5.3 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. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. 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.

## Section 6. Accidental Release Measures

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

**6.2 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.

**6.3 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.

## Section 7. Handling and Storage

### 7.1 Precautions for safe handling

#### Handling

**General Handling:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing dust or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Good housekeeping and controlling of dusts are necessary for safe handling of product. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage

Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

### 7.3 Specific end uses

Refer to product label.

<b>Section 8. Exposure Controls / Personal Protection</b>
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## 8.1 Control parameters

## Exposure Limits

Component	List	Type	Value
Titanium dioxide	Ireland OELV	TWA Respirable dust.	4 mg/m <sup>3</sup>
	Ireland OELV	TWA Total inhalable dust.	10 mg/m <sup>3</sup>
	ACGIH	TWA	10 mg/m <sup>3</sup>
	UK WEL	TWA Respirable.	4 mg/m <sup>3</sup>
	UK WEL	TWA Inhalable	10 mg/m <sup>3</sup>
Kaolin	Ireland OELV	TWA Respirable dust.	2.0 mg/m <sup>3</sup>
	ACGIH	TWA Respirable fraction.	2 mg/m <sup>3</sup> The value is for particulate matter containing no asbestos and <1% crystalline silica.
	UK WEL	TWA Respirable dust.	2 mg/m <sup>3</sup>
Silica, crystalline (quartz)	UK WEL	TWA Respirable.	0.1 mg/m <sup>3</sup>
	ACGIH	TWA Respirable fraction.	0.025 mg/m <sup>3</sup>
	Ireland OELV	TWA Respirable dust.	0.1 mg/m <sup>3</sup>
Pyroxsulam	Dow IHG	TWA	5 mg/m <sup>3</sup> D-SEN

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.

A D-SEN notation following the exposure guideline refers to the potential to produce dermal sensitization, as confirmed by human or animal data.

## 8.2 Exposure controls

### Personal Protection

**Eye/Face Protection:** Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

**Skin 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.

**Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact with the solid material. 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.

**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. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### Engineering Controls

**Ventilation:** 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.

## Section 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical State</b>	Granules.
<b>Color</b>	Tan
<b>Odor</b>	Musty
<b>Odor Threshold</b>	No test data available
<b>pH</b>	5.5 (@ 1 %) <i>CIPAC MT 75</i> (1% dispersion)
<b>Melting Point</b>	No test data available
<b>Freezing Point</b>	Not applicable
<b>Boiling Point (760 mmHg)</b>	Not applicable.
<b>Flash Point - Closed Cup</b>	Not applicable
<b>Evaporation Rate (Butyl Acetate = 1)</b>	Not applicable
<b>Flammable Limits In Air</b>	<b>Lower:</b> Not applicable <b>Upper:</b> Not applicable
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density (air = 1)</b>	Not applicable

<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	Not applicable
<b>Solubility in water (by weight)</b>	Dispersible
<b>Autoignition Temperature</b>	244 °C <i>EC Method A16</i> Ramped Temperature
<b>Decomposition Temperature</b>	No test data available
<b>Dynamic Viscosity</b>	Not applicable
<b>Kinematic Viscosity</b>	Not applicable
<b>Explosive properties</b>	No <i>EEC A14</i>
<b>Oxidizing properties</b>	No

## 9.2 Other information

**Bulk Density** 0.58 g/ml *Tapped Volumetric*

## Section 10. Stability and Reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

Thermally stable at typical use temperatures.

### 10.3 Possibility of hazardous reactions

Polymerization will not occur.

**10.4 Conditions to Avoid:** Some components of this product can decompose at elevated temperatures.

**10.5 Incompatible Materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

### 10.6 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: Hydrogen chloride. Hydrogen fluoride. Nitrogen oxides. Sulfur oxides.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

#### Acute Toxicity

##### Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD<sub>50</sub> has not been determined.

For similar material(s): LD<sub>50</sub>, rat, female > 5,000 mg/kg

##### Aspiration hazard

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

##### Dermal

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

As product: The dermal LD<sub>50</sub> has not been determined.

For similar material(s): LD<sub>50</sub>, rat > 5,000 mg/kg

##### Inhalation

Prolonged exposure is not expected to cause adverse effects. Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs.

As product: The LC<sub>50</sub> has not been determined.

##### Eye damage/eye irritation

May cause slight eye irritation. Corneal injury is unlikely.

##### Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

##### Sensitization



**Skin**

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

**Respiratory**

A component in this mixture may cause an allergic respiratory response.

**Repeated Dose Toxicity**

For the active ingredient(s): In animals, effects have been reported on the following organs: Kidney. Liver. Thymus. Bladder. Thyroid. Bone marrow. Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

**Chronic Toxicity and Carcinogenicity**

Based on information for component(s): Crystalline silica has been shown to cause cancer in laboratory animals and humans. Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies. For the active ingredient(s): Did not cause cancer in laboratory animals.

**Developmental Toxicity**

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

**Reproductive Toxicity**

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

**Genetic Toxicology**

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

**Component Toxicology - Pyroxsulam**

Inhalation	No deaths occurred at this concentration. LC50, 4 h, Respirable dust., rat > 5.12 mg/l
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**Component Toxicology - Cloquintocet-mexyl**

Inhalation	LC50, 4 h, Dust, rat, male and female > 5.42 mg/l
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Inhalation	No deaths occurred at this concentration.
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**Component Toxicology - Florasulam**

Inhalation	LC50, 4 h, Aerosol, rat > 5.0 mg/l
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**Component Toxicology - Titanium dioxide**

Inhalation	No deaths occurred at this concentration. LC50, 4 h, Dust, rat, male > 6.82 mg/l
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## Section 12. Ecological Information

**12.1 Toxicity**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

**Fish Acute & Prolonged Toxicity**

For similar material(s): LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 h: 56 mg/l

**Aquatic Invertebrate Acute Toxicity**

For similar material(s): EC50, *Daphnia magna* (Water flea), 48 h, immobilization: > 100 mg/l

**Aquatic Plant Toxicity**

ErC50, *Lemna minor* (duckweed), Growth rate inhibition, 7 d: 0.026 mg/l

ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth inhibition, 72 h: 1.4 mg/l

**12.2 Persistence and Degradability****Data for Component: Pyroxsulam**

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.

**OECD Biodegradation Tests:**

Biodegradation	Exposure Time	Method	10 Day Window
20 - 30 %	28 d	OECD 301B Test	fail

Data for Component: Cloquintocet-mexyl

No relevant information found.

Data for Component: Florasulam (ISO)

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

**Stability in Water (1/2-life):**

> 30 d

**OECD Biodegradation Tests:**

Biodegradation	Exposure Time	Method	10 Day Window
2 %	28 d	OECD 301B Test	fail

**Indirect Photodegradation with OH Radicals**

Rate Constant	Atmospheric Half-life	Method
7.04E-11 cm <sup>3</sup> /s	1.82 h	Estimated.

Theoretical Oxygen Demand: 0.85 mg/mg

Data for Component: Kaolin

Biodegradation is not applicable.

Data for Component: Sodium lignosulfonate

No relevant information found.

**Indirect Photodegradation with OH Radicals**

Rate Constant	Atmospheric Half-life	Method
1.089E-10 cm <sup>3</sup> /s	0.098 d	Estimated.

Data for Component: Citric acid

Material is expected to be readily biodegradable. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

**OECD Biodegradation Tests:**

Biodegradation	Exposure Time	Method	10 Day Window
97 %	28 d	OECD 301B Test	pass
98 %	7 d	OECD 302B Test	Not applicable

Data for Component: Silica, crystalline (quartz)

Biodegradation is not applicable.

Data for Component: Titanium dioxide

Biodegradation is not applicable.

**12.3 Bioaccumulative potential**Data for Component: Pyroxsulam

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

**Partition coefficient, n-octanol/water (log Pow):** -1.01 Measured

Data for Component: Cloquintocet-mexyl

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

**Partition coefficient, n-octanol/water (log Pow):** 5.3 Estimated.

**Bioconcentration Factor (BCF):** 122 - 621; Fish

Data for Component: Florasulam (ISO)

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

**Partition coefficient, n-octanol/water (log Pow):** -1.22

**Bioconcentration Factor (BCF):** 0.8; Fish; Measured

Data for Component: Kaolin

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

Data for Component: Sodium lignosulfonate

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

**Partition coefficient, n-octanol/water (log Pow):** -3.45 Estimated.

**Bioconcentration Factor (BCF):** 3.2; Fish

Data for Component: Citric acid

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

**Partition coefficient, n-octanol/water (log Pow):** -1.72 Measured

**Bioconcentration Factor (BCF):** 0.01; Fish; Measured

Data for Component: Silica, crystalline (quartz)

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

Data for Component: Titanium dioxide

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

## 12.4 Mobility in soil

Data for Component: Pyroxsulam

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

**Partition coefficient, soil organic carbon/water (Koc):** <= 42 Estimated.

**Henry's Law Constant (H):** 6.94E-07 Pa\*m<sup>3</sup>/mole. Calculated

Data for Component: Cloquintocet-mexyl

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

**Partition coefficient, soil organic carbon/water (Koc):** 38,070 Estimated.

**Henry's Law Constant (H):** 3.0E-03 Pa\*m<sup>3</sup>/mole.

Data for Component: Florasulam (ISO)

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

**Partition coefficient, soil organic carbon/water (Koc):** 4 - 54 **Henry's Law Constant (H):**

4.35E-07 Pa\*m<sup>3</sup>/mole.; 20 °C

Data for Component: Kaolin

**Mobility in soil:** No relevant data found.

Data for Component: Sodium lignosulfonate

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

**Partition coefficient, soil organic carbon/water (Koc):** > 99,999 Estimated.

**Henry's Law Constant (H):** 9.43E-25 atm\*m<sup>3</sup>/mole; 25 °C Estimated.

Data for Component: Citric acid

**Mobility in soil:** No relevant data found.

Data for Component: Silica, crystalline (quartz)

**Mobility in soil:** No relevant data found.

Data for Component: Titanium dioxide

**Mobility in soil:** No data available.

## 12.5 Results of PBT and vPvB assessment

Data for Component: Pyroxsulam

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).

Data for Component: Cloquintocet-mexyl

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).

Data for Component: Florasulam (ISO)

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).

Data for Component: Kaolin

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).

Data for Component: Sodium lignosulfonate

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

Data for Component: Citric acid

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Data for Component: Silica, crystalline (quartz)

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

Data for Component: Titanium dioxide

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

## 12.6 Other adverse effects

### Data for Component: Pyroxsulam

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Cloquintocet-mexyl

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Florasulam (ISO)

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Kaolin

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Sodium lignosulfonate

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Citric acid

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Silica, crystalline (quartz)

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

### Data for Component: Titanium dioxide

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

## Section 13. Disposal Considerations

### 13.1 Waste treatment 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.

## Section 14. Transport Information

### ADR/RID

#### 14.1 UN number

UN3077

#### 14.2 UN proper shipping name

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: CLOQUINTOCET-MEXYL AND PYROXSULAM

#### 14.3 Transport hazard class(es)

Hazard Class: 9

#### 14.4 Packing Group

PG III

#### 14.5 Environmental hazards

Environmentally hazardous

#### 14.6 Special precautions for user

Special Provisions: no data available

Hazard identification No:90

**ADNR / ADN**

**14.1 UN number**

UN3077

**14.2 UN proper shipping name**

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: CLOQUINTOCET-MEXYL AND PYROXSULAM

**14.3 Transport hazard class(es)**

Hazard Class: 9

**14.4 Packing Group**

PG III

**14.5 Environmental hazards**

Environmentally hazardous

**14.6 Special precautions for user**

no data available

**IMDG**

**14.1 UN number**

UN3077

**14.2 UN proper shipping name**

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: CLOQUINTOCET-MEXYL AND PYROXSULAM

**14.3 Transport hazard class(es)**

Hazard Class: 9

**14.4 Packing Group**

PG III

**14.5 Environmental hazards**

Marine pollutant

**14.6 Special precautions for user**

EMS Number: F-A,S-F

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

Not applicable

**ICAO/IATA**

**14.1 UN number**

UN3077

**14.2 UN proper shipping name**

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: CLOQUINTOCET-MEXYL AND PYROXSULAM

**14.3 Transport hazard class(es)**

Hazard Class: 9

**14.4 Packing Group**

PG III

**14.5 Environmental hazards**

Environmentally hazardous

**14.6 Special precautions for user**

no data available

**Section 15. Regulatory Information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

Product Registration Number: MAPP 14319

## 15.2 Chemical Safety Assessment

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

## Section 16. Other Information

### Hazard statement in the composition section

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Risk-phrases in the Composition section

R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Revision

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DAS Code: GF-1364

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

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