

# SAFETY DATA SHEET

DOW AGROSCIENCES LIMITED

Safety Data Sheet according to Reg. (EU) No 453/2010

**Product name:** PRAXYS Herbicide

**Revision Date:** 09.07.2014

**Version:** 3.1

**Print Date:** 13.08.2014

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/MIXTURE AND OF THE COMPANY/UNDERTAKING

---

### 1.1 Product identifiers

**Product name:** PRAXYS 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

LATCHMORE COURT

BRAND STREET

HITCHIN

England

SG5 1NH

UNITED KINGDOM

**Customer Information Number:**

[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 according to Regulation (EU) 1272/2008 :

Acute toxicity - Category 4 - Inhalation - H332

Skin irritation - Category 2 - H315

Eye irritation - Category 2 - H319

Aspiration toxicity - Category 1 - H304

Acute aquatic toxicity - Category 1 - H400

Chronic aquatic toxicity - Category 1 - H410

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

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

Harmful - R20

Irritant - R36/38

Dangerous for the environment - R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]:**

**Hazard pictograms**



**Signal word: DANGER**

**Hazard statements**

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

**Supplemental Hazard Statements**

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

**Precautionary statements**

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P331 Do NOT induce vomiting.

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.

**2.3 Other hazards**

no data available

---

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**


---

**3.2 Mixture**

This product is a mixture.

<b>CASRN / EC-No. / Index-No.</b>	<b>REACH Registration Number</b>	<b>Concentration</b>	<b>Component</b>	<b>Classification: REGULATION (EC) No 1272/2008</b>
<b>CASRN</b> 81406-37-3 <b>EC-No.</b> 279-752-9 <b>Index-No.</b> 607-272-00-5	–	13.9%	fluoroxypyr-meptyl (ISO)	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
<b>CASRN</b> 1702-17-6 <b>EC-No.</b> 216-935-4 <b>Index-No.</b> 607-231-00-1	–	7.7%	clopyralid (ISO)	Eye Dam. - 1 - H318
<b>CASRN</b> 145701-23-1 <b>EC-No.</b> Not available <b>Index-No.</b> 613-230-00-7	–	0.2%	Florasulam (ISO)	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
<b>CASRN</b> not available <b>EC-No.</b> 922-153-0 <b>Index-No.</b> –	01-2119451097-39 01-2119463583-34	> 40.0 - < 50.0 %	Hydrocarbons, C10-C13, aromatics, <1% naphthalene	Asp. Tox. - 1 - H304 Aquatic Chronic - 2 - H411
<b>CASRN</b> 1118-92-9 <b>EC-No.</b> 214-272-5 <b>Index-No.</b> –	–	> 10.0 - < 20.0 %	N,N- Dimethyloctanamid e	Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318
<b>CASRN</b> 26264-06-2 <b>EC-No.</b> 247-557-8 <b>Index-No.</b> –	–	< 5.0 %	Benzenesulfonic acid, dodecyl-, calcium salt	Acute Tox. - 4 - H302 Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318

<b>CASRN</b> Not Available <b>EC-No.</b> – <b>Index-No.</b> –	01-2119463583-34	<= 5.0 %	Hydrocarbons, C10, aromatics, <1% naphthalene	STOT SE - 3 - H336 Asp. Tox. - 1 - H304 Aquatic Chronic - 2 - H411
<b>CASRN</b> 91-20-3 <b>EC-No.</b> 202-049-5 <b>Index-No.</b> 601-052-00-2	–	< 1.0 %	Naphthalene	Acute Tox. - 4 - H302 Carc. - 2 - H351 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410

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

<b>CASRN / EC-No. / Index-No.</b>	<b>Concentration</b>	<b>Component</b>	<b>Classification: 67/548/EEC</b>
<b>CASRN</b> 81406-37-3 <b>EC-No.</b> 279-752-9 <b>Index-No.</b> 607-272-00-5	13.9%	fluoroxypyr-meptyl (ISO)	N - R50 - R53
<b>CASRN</b> 1702-17-6 <b>EC-No.</b> 216-935-4 <b>Index-No.</b> 607-231-00-1	7.7%	clopyralid (ISO)	Xi - R41
<b>CASRN</b> 145701-23-1 <b>EC-No.</b> Not available <b>Index-No.</b> 613-230-00-7	0.2%	Florasulam (ISO)	N - R50 - R53
<b>CASRN</b> not available <b>EC-No.</b> 922-153-0 <b>Index-No.</b> –	> 40.0 - < 50.0 %	Hydrocarbons, C10-C13, aromatics, <1% naphthalene	Xn - R65 R66 N - R51/53
<b>CASRN</b> 1118-92-9 <b>EC-No.</b> 214-272-5 <b>Index-No.</b> –	> 10.0 - < 20.0 %	N,N-Dimethyloctanamide	Xi - R38 - R41
<b>CASRN</b>	< 5.0 %	Benzenesulfonic acid,	Xi - R38 - R41

26264-06-2 <b>EC-No.</b> 247-557-8 <b>Index-No.</b> —		dodecyl-, calcium salt	Xn - R22
<b>CASRN</b> Not Available <b>EC-No.</b> — <b>Index-No.</b> —	<= 5.0 %	Hydrocarbons, C10, aromatics, <1% naphthalene	Xn - R65 N - R51/53 R66 R67
<b>CASRN</b> 91-20-3 <b>EC-No.</b> 202-049-5 <b>Index-No.</b> 601-052-00-2	< 1.0 %	Naphthalene	Carc.Cat.3 - R40 Xn - R22 N - R50 - R53

For the full text of the R-phrases mentioned in this Section, see Section 16.

---

## 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. 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.

**Eye contact:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

**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.

**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 any immediate medical attention and special treatment needed

**Notes to physician:** Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Maintain adequate

ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

---

## SECTION 5. FIREFIGHTING MEASURES

---

### 5.1 Extinguishing media

**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:** Do not use direct water stream. May spread fire.

### 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. 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.

### 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. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water. 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. 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.

---

## 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. Keep upwind of spill. Ventilate area of leak or spill. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**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: Absorb with materials such as: Clay. Dirt. Sand. 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.

**6.4 Reference to other sections:** References to other sections, if applicable, have been provided in the previous sub-sections.

---

## SECTION 7. HANDLING AND STORAGE

---

**7.1 Precautions for safe handling:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**7.2 Conditions for safe storage, including any incompatibilities:** 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.

**7.3 Specific end use(s):** Refer to product label.

---

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

### 8.1 Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
fluoroxypyr-meptyl (ISO)	Dow IHG	TWA	10 mg/m <sup>3</sup>
clopyralid (ISO)	Dow IHG	TWA	10 mg/m <sup>3</sup>
Florasulam (ISO)	GB EH40		
Naphthalene	ACGIH	TWA	10 ppm
	ACGIH	TWA	Absorbed via skin
	91/322/EEC	TWA	50 mg/m <sup>3</sup> 10 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.

### 8.2 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. Chemical goggles should be consistent with EN 166 or equivalent.

**Skin protection**

**Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). 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 EN 374) 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 EN 374) 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.

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

**Environmental exposure controls**

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	Liquid.
<b>Color</b>	Yellow to brown
<b>Odor</b>	Aromatic
<b>Odor Threshold</b>	No test data available
<b>pH</b>	2.49 <i>CIPAC MT 75</i> (1% aqueous suspension)
<b>Melting point/range</b>	Not applicable
<b>Freezing point</b>	No test data available
<b>Boiling point (760 mmHg)</b>	No test data available
<b>Flash point</b>	> 100 °C <i>Pensky-Martens Closed Cup ASTM D 93</i>



---

<b>Evaporation Rate (Butyl Acetate = 1)</b>	No test data available
<b>Flammability (solid, gas)</b>	Not applicable to liquids
<b>Lower explosion limit</b>	No test data available
<b>Upper explosion limit</b>	No test data available
<b>Vapor Pressure</b>	No test data available
<b>Relative Vapor Density (air = 1)</b>	No test data available
<b>Relative Density (water = 1)</b>	1.0399 at 20 °C / 4 °C <i>Digital Density Meter (Oscillating Coil)</i>
<b>Water solubility</b>	No test data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Auto-ignition temperature</b>	none below 400 degC
<b>Decomposition temperature</b>	No test data available
<b>Kinematic Viscosity</b>	7.8 cSt at 40 °C
<b>Explosive properties</b>	No
<b>Oxidizing properties</b>	No

#### 9.2 Other information

<b>Molecular weight</b>	no data available
<b>Surface tension</b>	36.1 mN/m at 25 °C

NOTE: The physical data presented above are typical values and should not be construed as a specification.

---

## SECTION 10. STABILITY AND REACTIVITY

---

**10.1 Reactivity:** no data available

**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. Generation of gas during decomposition can cause pressure in closed systems.

**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: Carbon monoxide. Carbon dioxide. Hydrogen fluoride. Nitrogen oxides. Sulfur oxides. Toxic gases are released during decomposition.

---

## SECTION 11. TOXICOLOGICAL INFORMATION

---

*Toxicological information on this product or its components appear in this section when such data is available.*

## 11.1 Information on toxicological effects

### 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.

As product:

LD50, rat, 3,378 mg/kg Estimated.

#### Acute dermal toxicity

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

As product:

LD50, rat, male and female, > 5,000 mg/kg

#### Acute inhalation toxicity

Mist may cause severe irritation of the upper respiratory tract (nose and throat) and lungs. Prolonged excessive exposure to mist may cause serious adverse effects, even death. For narcotic effects: No relevant data found.

As product:

LC50, rat, female, 4 Hour, dust/mist, 3.35 mg/l Estimated.

### Skin corrosion/irritation

Brief contact may cause moderate skin irritation with local redness. Effects may be slow to heal.

### Serious eye damage/eye irritation

May cause moderate eye irritation.

May cause slight corneal injury.

### Sensitization

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)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

### Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the major component(s):

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

Lung.

Gastrointestinal tract.

Thyroid.

Urinary tract.

Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

For the minor component(s):

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

#### **Carcinogenicity**

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

#### **Teratogenicity**

Clopyralid caused birth defects in test animals, but only at greatly exaggerated doses that were severely toxic to the mothers. No birth defects were observed in animals given clopyralid at doses several times greater than those expected during normal exposure. For the active ingredient(s): Fluroxypyr 1-methylheptyl ester. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

#### **Reproductive toxicity**

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

#### **Mutagenicity**

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

#### **Aspiration Hazard**

May be fatal if swallowed and enters airways.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

---

*Ecotoxicological information on this product or its components appear in this section when such data is available.*

### **12.1 Toxicity**

#### **Acute toxicity to fish**

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

LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 Hour, 7.1 mg/l, OECD Test Guideline 203 or Equivalent

#### **Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 6.9 mg/l, OECD Test Guideline 202 or Equivalent

#### **Acute toxicity to algae/aquatic plants**

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Biomass, 3.1 mg/l, OECD Test Guideline 201 or Equivalent

ErC50, *Lemna gibba*, 7 d, Growth rate inhibition, 0.42 mg/l

ErC50, diatom *Navicula* sp., 72 Hour, Biomass, 1.7 mg/l, OECD Test Guideline 201 or Equivalent

#### **Toxicity to Above Ground Organisms**

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

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

oral LD50, *Apis mellifera* (bees), 48 Hour, > 86.7µg/bee

contact LD50, *Apis mellifera* (bees), 48 Hour, > 200µg/bee

**Toxicity to soil-dwelling organisms**

LC50, *Eisenia fetida* (earthworms), 14 d, 248.21 mg/kg

**12.2 Persistence and degradability**

**fluoroxypyr-meptyl (ISO)**

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

10-day Window: Fail

**Biodegradation:** 32 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 2.2 mg/mg

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

, half-life, 454 d

**clopyralid (ISO)**

**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:** 5 - 10 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B or Equivalent

**Theoretical Oxygen Demand:** 0.71 mg/mg

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

Hydrolysis, pH 4 - 9, Half-life Temperature , Stable

**Florasulam (ISO)**

**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:** 2 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B or Equivalent

**Theoretical Oxygen Demand:** 0.85 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
	0.012 mg/mg

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

, > 30 d

**Hydrocarbons, C10-C13, aromatics, <1% naphthalene**

**Biodegradability:** For similar material(s): Biodegradation may occur under aerobic conditions (in the presence of oxygen). 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.

**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

**Benzenesulfonic acid, dodecyl-, calcium salt**

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

10-day Window: Pass

**Biodegradation:** 95 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301E or Equivalent

**Hydrocarbons, C10, aromatics, <1% naphthalene**

**Biodegradability:** Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

**Naphthalene**

**Biodegradability:** Material is expected to be readily biodegradable.

**12.3 Bioaccumulative potential**

**Bioaccumulation:** No data available for this product.

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

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

**12.6 Other adverse effects**

No relevant data found.

---

## **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.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

---

## SECTION 14. TRANSPORT INFORMATION

---

### Classification for ROAD and Rail transport (ADR/RID):

14.1 UN number	UN 3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fluroxypyr, Clopyralid)
14.3 Class	9
14.4 Packing group	III
14.5 Environmental hazards	Fluroxypyr, Clopyralid
14.6 Special precautions for user	Hazard identification No: 90

### Classification for SEA transport (IMO-IMDG):

14.1 UN number	UN 3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fluroxypyr, Clopyralid)
14.3 Class	9
14.4 Packing group	III
14.5 Environmental hazards	Fluroxypyr, Clopyralid
14.6 Special precautions for user	EmS: F-A, S-F
14.7 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):

14.1 UN number	UN 3082
14.2 Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Fluroxypyr, Clopyralid)
14.3 Class	9
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	No data available.

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.

---

---

## SECTION 15. REGULATORY INFORMATION

---

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

#### Other regulations

Registration Number: MAPP 13912

This product contains only components that have been either pre-registered, registered, are exempt from registration or are regarded as registered according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

#### 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

---

### Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

### Full text of R-phrases referred to under sections 2 and 3

R20	Harmful by inhalation.
R22	Harmful if swallowed.
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R41	Risk of serious damage to eyes.
R50	Very toxic to aquatic organisms.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

#### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Acute Tox. - 4 - H332 - On basis of test data.

Skin Irrit. - 2 - H315 - On basis of test data.

Eye Irrit. - 2 - H319 - On basis of test data.

Asp. Tox. - 1 - H304 - Calculation method

Aquatic Acute - 1 - H400 - On basis of test data.

Aquatic Chronic - 1 - H410 - On basis of test data.

#### Revision

Identification Number: 101189121 / A293 / Issue Date: 09.07.2014 / Version: 3.1

DAS Code: GF-1374

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

#### Legend

91/322/EEC	Europe. Commission Directive 91/322/EEC on establishing indicative limit values
Absorbed via skin	Absorbed via skin
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Dow IHG	Dow Industrial Hygiene Guideline
GB EH40	UK. EH40 WEL - Workplace Exposure Limits
TWA	8-hour, time-weighted average

#### 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 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.