Dow AgroSciences (Australia) Ltd. 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.

1. Product and Company Identification

**Product Name**
Starane™ 200 Herbicide

**COMPANY IDENTIFICATION**
Dow AgroSciences (Australia) Ltd.
A Subsidiary of The Dow Chemical Company
ABN 24 003 771 659
Level 5
20 Rodborough Rd
Frenchs Forest, NSW 2086
Australia

Customer Information Number: 1800-700-096
auscustomerservice@dow.com

**EMERGENCY TELEPHONE NUMBER**
24-Hour Emergency Contact: 61 3 9663 2130
Local Emergency Contact: 1800 033 882
For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126

Transport Emergency Only Dial 000

2. Hazards Identification

HAZARDOUS SUBSTANCES CLASSIFICATION: Classified as hazardous to health according to the criteria of the National Occupational Health and Safety Commission, Australia

**Risk Phrases:**
R40 – Limited evidence of a carcinogenic effect
R50/53 – Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment
R65 – Harmful: May cause lung damage if swallowed

**Safety Phrases:**
S23 – Do not breathe vapour/spray
S24 – Avoid contact with skin
S36 – Wear suitable protective clothing
S37 – Wear suitable gloves
S46/62 – If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label
S60 – This material and its container must be disposed of as hazardous waste
3. Composition Information

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
<th>Classification:</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>fluroxypyr-meptyl (ISO)</td>
<td>30.0 %</td>
<td>N: R50, R53</td>
<td>81406-37-3</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified</td>
<td>&gt; 60.0 - &lt; 70.0 %</td>
<td>Xn: R65</td>
<td>64742-94-5</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>&lt; 10.0 %</td>
<td>Carc. 3: R40; Xn: N: R50, R53</td>
<td>91-20-3</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>&lt; 5.0 %</td>
<td>Not Classified.</td>
<td>95-63-6</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified</td>
<td>&lt; 5.0 %</td>
<td>Xn: R65</td>
<td>64742-94-5</td>
</tr>
</tbody>
</table>

See Section 16 for full text of R-phrases.

4. First Aid Procedures

Consult the Poisons Information Centre (Australia 13 11 26) 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.

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. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

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: 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 immediate medical attention and special treatment needed

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. If burn is present, treat as any thermal burn, after decontamination. 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. Skin contact may aggravate preexisting dermatitis.
5. Fire Fighting Measures

Suitable extinguishing media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function. Water fog, applied gently may be used as a blanket for fire extinguishment.

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: 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. When product is stored in closed containers, a flammable atmosphere can develop. Dense smoke is produced when product burns.

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. Water fog, applied gently may be used as a blanket for fire extinguishment. 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.

See Section 9 for related Physical Properties

HAZCHEM CODE: 2X

6. Accidental Release Measures

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. 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.

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.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact...
with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed.

**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.

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## 8. Exposure Controls / Personal Protection

### Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>List</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>EU IOELV</td>
<td>TWA</td>
<td>100 mg/m³ 20 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
<tr>
<td></td>
<td>AU OEL</td>
<td>TWA</td>
<td>123 mg/m³ 25 ppm</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>ACGIH</td>
<td>TWA</td>
<td>10 ppm SKIN</td>
</tr>
<tr>
<td></td>
<td>AU OEL</td>
<td>TWA</td>
<td>52 mg/m³ 10 ppm</td>
</tr>
<tr>
<td></td>
<td>AU OEL</td>
<td>STEL</td>
<td>79 mg/m³ 15 ppm</td>
</tr>
<tr>
<td></td>
<td>EU IOELV</td>
<td>TWA</td>
<td>50 mg/m³ 10 ppm</td>
</tr>
<tr>
<td>fluroxypyr-meptyl (ISO)</td>
<td>Dow IHG</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

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 "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

### Personal Protection

**Eye/Face Protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

**Skin Protection:** Wear clean, body-covering clothing.

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. 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"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Butyl rubber. Neoprene. Chlorinated polyethylene. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 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.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

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

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: Recommended practices for eye protection in the industrial environment.
AS/NZS 1337: Eye protectors for industrial applications.
AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
AS/NZS 2161: Occupational protective gloves.
AS/NZS 2210: Occupational protective footwear.
AS 2919: Industrial clothing.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td></td>
<td>Brown</td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td>Aromatic</td>
</tr>
<tr>
<td>Odor Threshold</td>
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<td>No test data available</td>
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<tr>
<td>pH</td>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td>Melting Point</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing Point</td>
<td></td>
<td>No test data available</td>
</tr>
<tr>
<td>Boiling Point (760 mmHg)</td>
<td>No test data available.</td>
<td></td>
</tr>
<tr>
<td>Flash Point - Closed Cup</td>
<td>67 °C Pensky-Martens Closed Cup ASTM D 93</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
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<td></td>
</tr>
<tr>
<td>Flammable Limits In Air</td>
<td>Lower: No test data available</td>
<td>Upper: No test data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td></td>
<td>No test data available</td>
</tr>
<tr>
<td>Vapor Density (air = 1)</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (H2O = 1)</td>
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<td></td>
</tr>
<tr>
<td>Solubility in water (by weight)</td>
<td>emulsifiable</td>
<td></td>
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<tr>
<td>Autoignition Temperature</td>
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<tr>
<td>Decomposition</td>
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<td>No test data available</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td></td>
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<tr>
<td>Liquid Density</td>
<td></td>
<td>0.988 g/cm3 @ 25 °C Calculated</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical stability
Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions
Polymerization will not occur.

Conditions to Avoid: Some components of this product can decompose at elevated temperatures.
Incompatible Materials: Avoid contact with: 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.

11. Toxicological Information

Acute Toxicity
Ingestion
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. Single dose oral LD50 has not been determined. Estimated. LD50, rat > 4,500 mg/kg

Aspiration hazard
Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Dermal
Human case reports suggest Naphthalene may be absorbed through the skin in toxic amounts, especially in children. The dermal LD50 has not been determined. Estimated. LD50, rat > 2,000 mg/kg

Inhalation
Mist may cause irritation of upper respiratory tract (nose and throat). May cause central nervous system effects. The LC50 has not been determined. Estimated. LC50, Aerosol, rat > 5 mg/l

Eye damage/eye irritation
May cause slight eye irritation. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin corrosion/irritation
Prolonged contact may cause skin irritation with local redness. May cause drying and flaking of the skin.

Sensitization
Skin
Based on information for component(s): Naphthalene. Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Respiratory
No relevant information found.

Repeated Dose Toxicity
For the active ingredient(s): Based on available data, repeated exposures are not anticipated to cause significant adverse effects. For the solvent(s): Excessive exposure to solvent(s) may cause respiratory irritation and central nervous system depression. 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. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust. Excessive exposure may cause hemolysis, thereby impairing the blood’s ability to transport oxygen.

Chronic Toxicity and Carcinogenicity
For similar active ingredient(s): Did not cause cancer in laboratory animals. For the major component(s): Contains naphthalene which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

Developmental Toxicity
For the active ingredient(s): For the minor component(s) Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For the active ingredient(s): For the component(s) tested: Did not cause birth defects in laboratory animals.

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

Genetic Toxicology
For the active ingredient(s): For the solvent(s): Based on information for component(s): In vitro genetic toxicity studies were negative. In vitro genetic toxicity studies were negative in some cases and positive in other cases. For all components. Animal genetic toxicity studies were negative.

## 12. Ecological Information

### Toxicity

**Data for Component: fluroxypyr-methyl (ISO)**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

**Fish Acute & Prolonged Toxicity**

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 h: > 0.225 mg/l

Toxicity to aquatic species occurs at concentrations above material’s water solubility.

**Aqueous Invertebrate Acute Toxicity**

EC50, Daphnia magna (Water flea), semi-static test, 48 h: > 0.183 mg/l

Toxicity to aquatic species occurs at concentrations above material’s water solubility.

**Aquatic Plant Toxicity**

ErC50, diatom Navicula sp., static test, 72 h: 0.24 mg/l

Ec50, algae Scenedesmus sp., 72 h: > 0.47 mg/l

ErC50, Pseudokirchneriella subcapitata (green algae), 72 h: > 1.410 mg/l

Ec50, Lemna gibba, 14 d: > 2.31 mg/l

**Fish Chronic Toxicity Value (ChV)**

rainbow trout (Oncorhynchus mykiss), NOEC: 0.32 mg/l

**Aquatic Invertebrates Chronic Toxicity Value**

Daphnia magna (Water flea), static test, 21 d, number of offspring, NOEC: 0.060500 mg/l

**Toxicity to Above Ground Organisms**

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

dietary LC50, Colinus virginianus (Bobwhite quail): > 5000 mg/kg diet.

oral LD50, Apis mellifera (bees): > 100 micrograms/bee

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

**Toxicity to Soil Dwelling Organisms**

LC50, Earthworm, Lumbricus terrestris: > 1,000 mg/kg

**Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified**

Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

**Fish Acute & Prolonged Toxicity**

LC50, Gambusia affinis (Mosquito fish), 96 h: 811 mg/l

**Aquatic Plant Toxicity**

EC50, algae, 72 h: 21 - 165 mg/l

**Data for Component: Naphthalene**

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

**Fish Acute & Prolonged Toxicity**

LC50, Oncorhynchus mykiss (rainbow trout), 96 h: 0.11 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 1.6 - 24.1 mg/l

**Fish Chronic Toxicity Value (ChV)**

Other, flow-through test, 40 d, mortality, NOEC, NOEC: 0.37 mg/l

**Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified**

For similar material(s): Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

**Fish Acute & Prolonged Toxicity**

For similar material(s): EC50, Oncorhynchus mykiss (rainbow trout), 96 h: 3.6 mg/l
Aquatic Invertebrate Acute Toxicity
For similar material(s): EC50, Daphnia magna (Water flea), 48 h: 1.1 mg/l

Aquatic Plant Toxicity
For similar material(s): EC50, Pseudokirchneriella subcapitata (green algae), 72 h: 7.9 mg/l

Data for Component: 1,2,4-Trimethylbenzene
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity
LC50, Pimephales promelas (fathead minnow), flow-through test, 96 h: 7.7 mg/l

Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h: 3.6 mg/l

Persistence and Degradability

Data for Component: fluoroxypr-mephtyl (ISO)
Material is not readily biodegradable according to OECD/EEC guidelines.

Stability in Water (1/2-life):
454 d

OECD Biodegradation Tests:

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>Exposure Time</th>
<th>Method</th>
<th>10 Day Window</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28 d</td>
<td>OECD 301D Test</td>
<td>fail</td>
</tr>
</tbody>
</table>

Theoretical Oxygen Demand: 2.2 mg/mg

Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified
Material is not readily biodegradable according to OECD/EEC guidelines.

Data for Component: Naphthalene
Material is expected to be readily biodegradable.

OECD Biodegradation Tests:

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>Exposure Time</th>
<th>Method</th>
<th>10 Day Window</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.2 d</td>
<td>Other guidelines</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Bioaccumulative potential

Data for Component: fluoroxypr-mephtyl (ISO)

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

Partition coefficient, n-octanol/water (log Pow): 5.04 Measured

Bioconcentration Factor (BCF): 26; Oncorhynchus mykiss (rainbow trout); Measured

Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified

Bioaccumulation: No data available.

Data for Component: Naphthalene

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

Partition coefficient, n-octanol/water (log Pow): 3.3 Measured

Bioconcentration Factor (BCF): 40 - 300; Fish; Measured

Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified

Bioaccumulation: For similar material(s): Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Data for Component: 1,2,4-Trimethylbenzene

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

**Partition coefficient, n-octanol/water (log Pow):** 3.63 Measured

**Bioconcentration Factor (BCF):** 33 - 275; Cyprinus carpio (Carp); Measured

**Mobility in soil**

Data for Component: fluoroxypr-metpyl (ISO)

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

**Partition coefficient, soil organic carbon/water (Koc):** 6,200 - 43,000

**Henry’s Law Constant (H):** 5.5E+00 Pa*m3/mole. Measured

Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified

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

Data for Component: Naphthalene

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

**Partition coefficient, soil organic carbon/water (Koc):** 240 - 1,300 Measured

**Henry’s Law Constant (H):** 2.92E-04 - 5.53E-04 atm*m3/mole; 25 °C Measured

Data for Component: Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified

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

Data for Component: 1,2,4-Trimethylbenzene

**Mobility in soil:** Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient, soil organic carbon/water (Koc):** 720 Estimated.

**Henry’s Law Constant (H):** 6.16E-03 atm*m3/mole; 25 °C Measured

---

13. **Disposal Considerations**

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.

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14. **Transport Information**

**ROAD AND RAIL TRANSPORT:**
Not dangerous goods under the ADG code when being transported in IBCs or other receptacles < 500 L (kg), (Special Provision AU01).

**IMDG**

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

**Technical Name:** Fluoroxypr, NAPHTHALENE

**Hazard Class:** 9

**ID Number:** UN3082

**Packing Group:** PG III

**EMS Number:** F-A,S-F

**Marine pollutant:** Yes

**ICAO/IATA**

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

**Technical Name:** Fluoroxypr, NAPHTHALENE

**Hazard Class:** 9

**ID Number:** UN 3082

**Packing Group:** PG III

**Cargo Packing Instruction:** 964
Passenger Packing Instruction: 964
Environmental Hazard: Yes

ROAD AND RAIL TRANSPORT:
Not dangerous goods under the ADG code when being transported in IBCs or other receptacles < 500 L (kg). (Special Provision AU01).
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

Poison Schedule: 5
APVMA Approval Number
40352

16. Other Information

Risk-phrases in the Composition section
Risk Phrases:
R40 – Limited evidence of a carcinogenic effect
R50/53 – Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment
R65 – Harmful: May cause lung damage if swallowed

Revision
Revisions: Sections 2,3,14
DAS Code: GF-197

Legend

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<th>Code</th>
<th>Description</th>
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<td>W/W</td>
<td>Weight/Weight</td>
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<td>Occupational Exposure Limit</td>
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<td>STEL</td>
<td>Short Term Exposure Limit</td>
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<td>TWA</td>
<td>Time Weighted Average</td>
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<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists, Inc.</td>
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<td>DOW IHG</td>
<td>Dow Industrial Hygiene Guideline</td>
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<td>WEEL</td>
<td>Workplace Environmental Exposure Level</td>
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<td>HAZDES</td>
<td>Hazard Designation</td>
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