Safety Data Sheet

## 1. IDENTIFICATION

## Product Identifier

Product Name

## Sweep

Other means of identification

| SDS \# | MANA-009 |
| :---: | :---: |
| Registration Number(s) | EPA Reg. No. 66222-173 |
| UN/ID No | UN3077 |
| Recommended use of the chemical and restrictions on use |  |
| Recommended Use | EPA registered pesticide. |
| Details of the supplier of the safety data sheet |  |
| Manufacturer Address |  |
| Makhteshim Agan of North America, Inc. |  |
| 3120 Highwoods Blvd., Suite 100 |  |
| Raleigh, NC 27604 |  |
| 1-919-256-9300 |  |
| Emergency Telephone Number |  |
| Emergency Telephone (24 hr) | For fire, spill and/or leak contact INFOTRAC: |
|  | 1-800-535-5053 (North America) 1-352-323-3500 (International) |
|  | For medical emergencies and health/safety inquiries, contact PROSAR 1-877-250-9291 |

## 2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Brown granular solid
Physical State Solid
Odor Faint odor

## Classification

| Eye damage/eye irritation | Category 2 |
| :--- | :--- |
| Carcinogenicity | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 2 |

## Signal Word

Warning

## Hazard Statements

Causes serious eye irritation
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure

## Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray

## Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

## Precautionary Statements - Storage

Store locked up

## Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

## Other Hazards

Very toxic to aquatic life with long lasting effects

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-\% |
| :---: | :---: | :---: |
| Diuron | $330-54-1$ | $38.8-41.2$ |
| Bromacil | $314-40-9$ | $38.8-41.2$ |

**|f Chemical Name/CAS No is "proprietary" and/or Weight-\% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

## 4. FIRST-AID MEASURES

## First Aid Measures

| General Advice | When possible, have the product container or label with you when calling a poison control <br> center or doctor or going for treatment. |
| :--- | :--- |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. <br> Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate <br> medical attention/advice. |
| Skin Contact | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin <br> with water/shower. Wash contaminated clothing before reuse. Seek immediate medical <br> attention/advice. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give <br> oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. <br> Seek medical advice. |

Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.

## Most important symptoms and effects

## Symptoms May cause mild eye irritation.

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

Notes to Physician Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

## Suitable Extinguishing Media

Water spray (fog). Dry chemical. Foam. Carbon dioxide ( $\mathrm{CO}_{2}$ ).
Unsuitable Extinguishing Media Not determined.

## Specific Hazards Arising from the Chemical

Not determined.

Hazardous Combustion Products None known.

## Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

## 6. ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

Personal Precautions

Environmental Precautions

Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

## Methods and material for containment and cleaning up

Methods for Containment

Methods for Clean-Up

Prevent further leakage or spillage if safe to do so.
Pick up material with non-sparking shovel or explosion proof vacuum cleaner. Never return spills in the original containers for re-use. Pick up and transfer to properly labeled containers. If spill area is on ground near valuable plants or trees, remove top 2 inches of soil after initial clean up.

## 7. HANDLING AND STORAGE

## Precautions for safe handling

Advice on Safe Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

## Conditions for safe storage, including any incompatibilities

## Storage Conditions

Incompatible Materials

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Protect from excessive heat. Store locked up. Keep/store only in original container. Store at ambient conditions.

Potassium permanganate.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
| :---: | :---: | :---: | :---: |
| Bromacil |  |  |  |
| $314-40-9$ | TWA: $10 \mathrm{mg} / \mathrm{m}^{3}$ | (vacated) TWA: 1 ppm <br> (vacated) TWA: $10 \mathrm{mg} / \mathrm{m}^{3}$ | TWA: 1 ppm <br> TWA: $10 \mathrm{mg} / \mathrm{m}^{3}$ |
| Diuron | TWA: $10 \mathrm{mg} / \mathrm{m}^{3}$ | (vacated) TWA: $10 \mathrm{mg} / \mathrm{m}^{3}$ | TWA: $10 \mathrm{mg} / \mathrm{m}^{3}$ |
| $330-54-1$ |  |  |  |

## Appropriate engineering controls

Engineering Controls
Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

## Individual protection measures, such as personal protective equipment

Eye/Face Protection Use splash goggles or face shield when contact may occur.

Skin and Body Protection

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

General Hygiene Considerations Wash hands before eating, drinking, smoking and using the toilet. Remove contaminated clothing promptly and wash thoroughly before reused.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

| Physical State | Solid |  |  |
| :--- | :--- | :--- | :--- |
| Appearance | Brown granular solid | Odor | Faint odor |
| Color | Brown | Odor Threshold | Not determined |


| Property | Values | Remarks •Method |
| :--- | :--- | :--- |
|  | $7.61+/-0.01$ |  |
| Melting Point/Freezing Point | Not applicable |  |
| Boiling Point/Boiling Range | Not determined |  |
| Flash Point | Not applicable |  |
| Evaporation Rate | Not applicable |  |
| Flammability (Solid, Gas) | Not determined |  |
| Upper Flammability Limits | Not applicable |  |
| Lower Flammability Limit | Not applicable |  |
| Vapor Pressure | Not established |  |
| Vapor Density | Not determined |  |
| Specific Gravity | Not determined |  |
| Water Solubility | Not determined |  |
| Solubility in other solvents | Not determined |  |
| Partition Coefficient | Not determined |  |
| Auto-ignition Temperature | Not determined |  |
| Decomposition Temperature | Not determined |  |
| Kinematic Viscosity | Not determined |  |
| Dynamic Viscosity | Not determined |  |
| Explosive Properties | Not determined |  |
| Oxidizing Properties | Not determined | $0.565 \mathrm{~g} / \mathrm{ml}$ (Pour); $0.614 \mathrm{~g} / \mathrm{ml}$ (Tap) |
| Bulk Density |  |  |

## 10. STABILITY AND REACTIVITY

## Reactivity

Not reactive under normal conditions.

## Chemical Stability

Stable under recommended storage conditions.

## Possibility of Hazardous Reactions

None under normal processing.

## Conditions to Avoid

Extreme heat and open flames.

## Incompatible Materials

Potassium permanganate.

## Hazardous Decomposition Products

May include but are not limited to: oxides of carbon, oxides of phosphorous. Hydrogen chloride.

## 11. TOXICOLOGICAL INFORMATION

## Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye irritation.

| Skin Contact | Avoid contact with skin. |
| :--- | :--- |
| Inhalation | Avoid breathing vapors or mists. |
| Ingestion | Do not ingest. |

## Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
| :--- | :---: | :---: | :---: |
| Bromacil <br> $314-40-9$ | $=641 \mathrm{mg} / \mathrm{kg} \mathrm{(Rat)}$ | $>2500 \mathrm{mg} / \mathrm{kg} \mathrm{(Rat)}$Rabbit $)$ | - |
| Diuron |  |  |  |
| $330-54-1$ | $=1017 \mathrm{mg} / \mathrm{kg} \mathrm{(Rat)}($ | $>5 \mathrm{~g} / \mathrm{kg}$ (Rat) | $>0.265 \mathrm{mg} / \mathrm{L} \mathrm{(Rat)}$ |

## Information on physical, chemical and toxicological effects

## Symptoms Please see section 4 of this SDS for symptoms

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Suspected of causing cancer.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
| :---: | :---: | :---: | :---: | :---: |
| Bromacil | A3 |  |  |  |
| $314-40-9$ |  |  |  |  |

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

## Product Information (Numerical measures of toxicity)

Acute Oral LD50 (Rat): $2,300 \mathrm{mg} / \mathrm{kg}$
Acute Dermal LD50 (Rabbit): >2,000 mg/kg
Acute Inhalation LC50 (Rat): $>5.2 \mathrm{mg} / \mathrm{L}$ (4-hr)
Eye Irritation: Moderately irritating.
Dermal Irritation: Slightly irritating.
Dermal Sensitization: Not a skin sensitizer.

## 12. ECOLOGICAL INFORMATION

## Ecotoxicity

Very toxic to aquatic life with long lasting effects. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Bromacil is known to leach through soil and has been found in ground water as a result of normal field use. Users are advised not to apply in areas where soils are permeable, particularly where ground water is used for drinking water. Consult with the pesticide state lead agency for information regarding soil permeability and aquifer vulnerability in your area.

## Component Information

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { Bromacil } \\ & 314-40-9 \end{aligned}$ |  | 180-192: 96 h Pimephales promelas $\mathrm{mg} / \mathrm{L}$ LC50 flowthrough 32: 96 h Lepomis macrochirus mg/L LC50 static 30-40: 96 h Oncorhynchus mykiss mg/L LC50 static |  |  |


| $\begin{gathered} \hline \hline \text { Diuron } \\ 330-54-1 \end{gathered}$ | 0.022: 96 h Desmodesmus subspicatus mg/L EC50 0.036: 72 h Desmodesmus subspicatus $\mathrm{mg} / \mathrm{L}$ EC50 static 0.1: 72 h <br> Pseudokirchneriella subcapitata mg/L EC50 static 0.0007: 96 h Pseudokirchneriella subcapitata mg/L EC50 static | 13.4-15: 96 h Pimephales promelas mg/L LC50 flowthrough 13.4-15: 96 h Pimephales promelas $\mathrm{mg} / \mathrm{L}$ LC50 static 2.3-3.3: 96 h Lepomis macrochirus mg/L LC50 static 4: 96 h Lepomis macrochirus mg/L LC50 1.5 2.54: 96 h Oncorhynchus mykiss mg/L LC50 static 14.7: 96 h Oncorhynchus mykiss mg/L LC50 2.9: 96 h Cyprinus carpio mg/L LC50 | EC50 = $16.38 \mathrm{mg} / \mathrm{L} 5 \mathrm{~min}$ | 1.4: 48 h Daphnia magna mg/L EC50 6.3-13: 48 h Daphnia magna mg/L EC50 Static |
| :---: | :---: | :---: | :---: | :---: |

## Persistence/Degradability

Not determined.

## Bioaccumulation

Not determined.

## Mobility

| Chemical Name | Partition Coefficient |
| :---: | :---: |
| Diuron | 2.82 |
| $330-54-1$ | 2.11 |
| Bromacil |  |

## Other Adverse Effects

Not determined

## 13. DISPOSAL CONSIDERATIONS

## Waste Treatment Methods

Disposal of Wastes

Contaminated Packaging

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinse is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA regional office. Never place any unused product down an indoor or outdoor drain. Do not contaminate water, food or feed by disposal.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## 14. TRANSPORT INFORMATION

## DOT

Package size less than 250 Lbs. (113 Kg.): Not regulated

## UN/ID No <br> Proper Shipping Name <br> Hazard Class <br> Packing Group <br> Reportable Quantity (RQ) <br> Marine pollutant

UN3077
Environmentally hazardous substance, solid, n.o.s. (Diuron)
9
III
Packages > 250 lb .
Yes
IATA
UN/ID No
Proper Shipping Name
Hazard Class

## UN3077

Environmentally hazardous substance, solid, n.o.s. (Diuron)
9

| Packing Group <br> Marine Pollutant | III |
| :--- | :--- |
|  | Yes |
| IMDG |  |
| UN/ID No | UN3077 |
| Proper Shipping Name | Environmentally hazardous substance, solid, n.o.s. (Diuron) |
| Hazard Class | 9 |
| Packing Group | III |
| Marine Pollutant | Yes |

## 15. REGULATORY INFORMATION

International Inventories
TSCA
Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

## US Federal Regulations

## CERCLA

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
| :---: | :---: | :---: | :---: |
| Diuron | 100 lb |  | $R Q 100 \mathrm{lb}$ final RQ |
| $330-54-1$ |  | $R Q 45.4 \mathrm{~kg}$ final RQ |  |

## SARA 311/312 Hazard Categories

| Acute Health Hazard | Yes |
| :--- | :--- |
| Chronic Health Hazard | Yes |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

## SARA 313

| Chemical Name | CAS No | Weight-\% | SARA 313 - Threshold <br> Values \% |
| :---: | :---: | :---: | :---: |
| Bromacil $-314-40-9$ | $314-40-9$ | $38.8-41.2$ | 1.0 |
| Diuron $-330-54-1$ | $330-54-1$ | $38.8-41.2$ | 1.0 |

## CWA (Clean Water Act)

| Component | CWA - Reportable <br> Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous <br> Substances |
| :---: | :---: | :---: | :---: | :---: |
| Diuron | 100 lb |  |  | $\times$ |
| $330-54-1(38.8-41.2)$ |  |  |  |  |

## US State Regulations

## California Proposition 65

This product contains the following Proposition 65 chemicals.

| Chemical Name | California Proposition 65 |
| :---: | :---: |
| Diuron $-330-54-1$ | Carcinogen |

## U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
| :---: | :---: | :---: | :---: |
| Bromacil | $X$ | $X$ |  |
| $314-40-9$ |  |  |  |


| Diuron | $X$ | $X$ | $X$ |
| :---: | :---: | :---: | :---: |
| $330-54-1$ |  |  |  |

## EPA Pesticide Registration Number 66222-173 <br> EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

## EPA Pesticide Label

## Signal Word: Caution

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.
Difference between SDS and EPA pesticide label

| Signal Word | Caution | Warning |
| :--- | :--- | :--- |
| Acute toxicity - Oral | Harmful if swallowed | N/A |
| Acute toxicity - Dermal | Harmful if absorbed <br> through the skin | N/A |
| Serious eye damage/eye irritation | Causes moderate eye <br> irritation | Causes serious eye irritation |
| Carcinogenicity | N/A | Suspected of causing cancer |
| STOT - repeated exposure | N/A | May cause damage to organs <br> through prolonged or <br> repeated exposure |

## 16. OTHER INFORMATION

| NFPA | Health Hazards |
| :--- | :--- |
|  | 3 |
|  | Health Hazards |
|  | 3 |

Flammability
1
Flammability
1
Instability
0
Physical Hazards
0

Special Hazards
None
Personal Protection
See section 8

Issue Date:
Revision Date:
Revision Note:

23-Feb-2011
23-Nov-2015
Updated format from 02-Jun-2014

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

