1 Identification

· Product identifier
  · Trade name: SedgeHammer® Turf Herbicide
  · EPA Registration No.: 81880-I-10163
  · CAS Number: Active Ingredient: Halosulfuron-Methyl (75%), CAS:100784-20-1
  · Application of the substance / the mixture Turf herbicide

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    Gowan Company
    P. O. Box 5569
    Yuma, Arizona 85366-5569
    (928) 783-8844
  · Information department: sds@gowanco.com
  · Emergency telephone number:
    Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300
    Outside the U.S. & Canada: +011 (703) 527-3887

For medical emergency (Prosar®): (888) 478-0798

2 Hazard(s) identification

· Classification of the substance or mixture
  ! GHS07
  Acute Tox. 4  H302  Harmful if swallowed.

· Label elements
  · GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms
    ! GHS07

· Signal word Warning
· Hazard statements
  H302 Harmful if swallowed.
· Precautionary statements
  P264 Wash thoroughly after handling.
  P270 Do not eat, drink or smoke when using this product.
  P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
  P330 Rinse mouth.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Hazard description:
  CAUSES MODERATE EYE IRRITATION. HARMFUL IF SWALLOWED. Avoid contact with eyes or clothing.

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Trade name: SedgeHammer® Turf Herbicide
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- Classification system:
  - NFPA ratings (scale 0 - 4)
    
    ![NFPA Ratings]
    
    Health = 2
    Fire = 0
    Reactivity = 0

    HAZARD INDEX:
    4 Severe Hazard
    3 Serious Hazard
    2 Moderate
    1 Slight Hazard
    0 Minimal Hazard

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable in US.
    - vPvB: Not applicable in US.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
  - Description: Only the identities of the active ingredient(s) and any hazardous inert ingredients are listed.
  
  - Dangerous components:
    
    | CAS:    | Halosulfuron-methyl | Aquatic Acute 1, H400; Aquatic Chronic 1, H410 | 75.0% |
    |---------|---------------------|-----------------------------------------------|-------|

4 First-aid measures

- Description of first aid measures
  - General information:
    Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
    You may also contact 1-888-478-0798 for emergency medical treatment information.
  - After eye contact:
    - Hold eye open and rinse slowly and gently with water for 15-20 minutes.
    - Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.
    - Call a poison control center or doctor for treatment advice.
  - After swallowing:
    - Call a poison control center or doctor immediately for treatment advice.
    - Remove visible particles from mouth.
    - Have person rinse mouth throughly with water, spit out rinse water.
    - Have person sip a glass of water if able to swallow.
    - Do not induce vomiting unless told to do so by a poison control center or doctor.
    - Do not give anything by mouth to an unconscious person.
  - Information for doctor:
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed: No further relevant information available.
5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  Firefighters and others that may be exposed to vapors, mists, dusts, or products of combustion should wear full protective clothing and self-contained breathing apparatus. Equipment should be thoroughly cleaned after use.
- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions:
  Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
- Methods and material for containment and cleaning up:
  Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush residual spill area with water. Refer to Section 13 for disposal information and Section 15 for reportable quantity information.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    No special measures required.
    Avoid contact with eyes or clothing. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.
  - Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.
- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles:
      Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Store under cool, dry conditions (below 120°F). Do not store under moist conditions.
    - Information about storage in one common storage facility: Store away from foodstuffs.
    - Further information about storage conditions: None.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
Control parameters

Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:
Causes moderate eye irritation. Harmful if swallowed. Avoid contact with eyes or clothing.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

Material of gloves
chemical resistant gloves, such as nitrile rubber, neoprene rubber or polyethylene. For more options, follow instructions for category A (dry and water-based formulations) on an EPA chemical resistant category selection chart.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Body protection:
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Coveralls
- Shoes plus socks
- Chemical resistant gloves, such as nitrile rubber, neoprene rubber or polyethylene. For more options, follow instructions for category A (dry and water-based formulations) on an EPA chemical resistant category selection chart.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

- Appearance:
  - Form: Granulate
  - Color: Beige
  - Odor: Slightly Vanilla
  - Odor threshold: Not determined.

- pH-value at 20 °C (68 °F): 6.6

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.
10 Stability and reactivity

- **Reactivity**: No further relevant information available.

- **Chemical stability**
  This product should be stable for at least two years under normal conditions of warehouse storage. Store in a cool, well-ventilated place away from foodstuffs, reducing agents and acids.

- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.

- **Possibility of hazardous reactions**: No dangerous reactions known.

- **Conditions to avoid**: Store under cool, dry conditions (below 120°F). Do not store under moist conditions.

- **Incompatible materials**: Reducing agents and acids

- **Hazardous decomposition products**: No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity**

  - **LD/LC50 values that are relevant for classification**:

    - Oral LD50: 1287 mg/kg (rat)
    - Dermal LD50: >5000 mg/kg (rat)
    - Inhalative LC50/4 h: >5.7 mg/l (rat)

- **Primary irritant effect**:
  - on the skin: Slightly irritating
  - on the eye: Moderately Irritating

- **Sensitization**: No sensitizing effects known.
Safety Data Sheet  
acc. to OSHA HCS

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- Additional toxicological information:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)  
    None of the ingredients are listed.

  - NTP (National Toxicology Program)  
    None of the ingredients are listed.

  - OSHA-Ca (Occupational Safety & Health Administration)  
    None of the ingredients are listed.

12 Ecological information

- Toxicity  
This product is toxic to non-target vascular plants. Do not apply directly to water, 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. Halosulfuron-methyl is known to leach through soil into ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

  - Aquatic toxicity: No further relevant information available.

- Persistence and degradability  
No further relevant information available.

- Behavior in environmental systems:

  - Bioaccumulative potential  
    No further relevant information available.

  - Mobility in soil  
    No further relevant information available.

  - Other information:
    Ecotoxicity data shown is for the active ingredient, halosulfuron-methyl.  
    48-hr EC50 Daphnia magna: >107 mg/L; practically nontoxic.  
    96-hr LC50 Bluegill sunfish: >118 mg/L; practically nontoxic.  
    96-hr LC50 Rainbow trout: >131 mg/L; practically nontoxic.  
    5-day EC50 Algae (Selenastrum capricornutum): 0.0041/L; very highly toxic.

- Ecotoxicological effects:

  - Other information:
    This product is toxic to non-target vascular plants. Do not apply directly to water, 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.

    Halosulfuron-methyl is known to leach through soil into ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

- Additional ecological information:

  - General notes:
    Water hazard class 2 (Self-assessment): hazardous for water  
    Do not allow product to reach ground water, water course or sewage system.  
    Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment

  - PBT: Not applicable.  
  - vPvB: Not applicable.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill for pesticide disposal or in accordance with applicable Federal, state or local procedures.

- **Uncleaned packagings:**
  - **Recommendation:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

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14 Transport information

- **UN-Number**
  - **DOT**
    - ADR, IMDG, IATA: Not Regulated
  - **ADR, IMDG, IATA**
    - UN3077

- **UN proper shipping name**
  - **DOT**
  - **ADR**
    - 3077 Environmentally hazardous substances, solid, n.o.s. (Halosulfuron-Methyl)
  - **IMDG**
    - ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Halosulfuron-Methyl), MARINE POLLUTANT
  - **IATA**
    - ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Halosulfuron-Methyl)

- **Transport hazard class(es)**
  - **DOT**
    - **Class**
    - Not Regulated
  - **ADR, IMDG, IATA**
    - **Class**
      - N/A
    - **Label**
      - 9 Miscellaneous dangerous substances and articles

- **Packing group**
  - **DOT**
    - **Group**
    - N/A
  - **ADR, IMDG, IATA**
    - **Group**
      - III

- **Environmental hazards:**
  - **Product contains environmentally hazardous substances:**
    - Halosulfuron-methyl

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Trade name: SedgeHammer® Turf Herbicide
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- Marine pollutant: Yes
  Symbol (fish and tree)
- Special marking (ADR): Symbol (fish and tree)
- Special marking (IATA): Symbol (fish and tree)
- Special precautions for user
  - Danger code (Kemler): Warning: Miscellaneous dangerous substances and articles
  - EMS Number: 90 F-A,S-F
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable
- UN "Model Regulation":
  - US DOT: Not regulated
  - All Others: UN3077, Environmentally hazardous substances, solid, n.o.s. (Halosulfuron-Methyl), 9, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  EPA /FIFRA Information:
  This chemical is a pesticide product registered by the Environmental Protection Agency (EPA) 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.
  - SARA Title III
    - Section 355 (extremely hazardous substances):
      None of the ingredients are listed.
    - Section 313 (Specific toxic chemical listings):
      None of the ingredients are listed.
  - TSCA (Toxic Substances Control Act):
    None of the ingredients are listed.
  - Proposition 65
    - Chemicals known to cause cancer:
      None of the ingredients are listed.
    - Chemicals known to cause reproductive toxicity for females:
      None of the ingredients are listed.
    - Chemicals known to cause reproductive toxicity for males:
      None of the ingredients are listed.
    - Chemicals known to cause developmental toxicity:
      None of the ingredients are listed.
    - Carcinogenicity categories
      - EPA (Environmental Protection Agency)
        None of the ingredients are listed.
      - TLV (Threshold Limit Value established by ACGIH)
        None of the ingredients are listed.
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- NIOSH-Ca (National Institute for Occupational Safety and Health)  
None of the ingredients are listed.

- GHS label elements  
Not applicable  
The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms  
Not applicable

- Signal word  
(US EPA) CAUTION

- Hazard statements  
Causes moderate eye irritation.  
Harmful if swallowed.  
Avoid contact with eyes or clothing.  
Wash thoroughly with soap and water after handling.  
H302 Harmful if swallowed.

- Precautionary statements  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Supply Chain
- Contact: sds@gowanco.com
- Date of preparation / last revision 08/05/2019 / 6

- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health
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TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

* Sources SEDGEHAMMER® is a registered trademark of Gowan Company, LLC.

* Data compared to the previous version altered.