1 Identification

- **Product identifier**
  - **Trade name: Badge® SC**
  - **EPA Registration No.: 80289-3-10163**
  - **CAS Number:**
    - Active Ingredients: Copper Oxichloride (16.81%), CAS: 1332-40-7
    - Copper Hydroxide (15.36%), CAS: 20427-59-2

  Relevant identified uses of the substance or mixture and uses advised against
  - Sector of Use: Agriculture use
  - **Application of the substance / the mixture**
    - Agricultural Fungicide / Bactericide

  Restrictions on use: See product label for restrictions.

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Isagro S.p.A. (d/b/a Isagro USA, Inc.)
    - 430 Davis Drive, Suite 240
    - Morrisville, NC 27560
    - Tel: 919-321-5200

  Distributed by:
  - Gowan Company
  - P.O. Box 5569
  - Yuma, Arizona 85366-5569
  - Tel. (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**
  - This SDS is based on classification according to US OSHA Hazard Communication Standard (29 CFR 1910.1200)

  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

(Contd. on page 2)
3 Composition/information on ingredients

- Chemical characterization: Mixtures
  - Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1332-40-7</td>
<td>Copper oxychloride</td>
<td>16.81%</td>
</tr>
</tbody>
</table>

(Contd. on page 3)
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 inhalation:
    • Move person to fresh air.
    • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
    • Call poison control center or doctor for further treatment advice.
  · After 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.
  · 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.
    • 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 Unknown
    • 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
  BADGE SC is not flammable or explosive.
  Avoid inhaling the fumes.
· Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
  Keep unprotected persons away.

(Contd. on page 4)
Trade name: Badge® SC  
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- Environmental precautions:  
  Do not allow product to reach sewage system or any water course.  
  This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff.  
  This product has a potential for runoff for several months or more after application. Poorly draining soils and  
  soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may  
  be hazardous to aquatic organisms in water adjacent to treated areas.  
  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 or rinsate.  
- Methods and material for containment and cleaning up:  
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
  Control spills with soil or sand. If the product has entered a waterway and/or drainage system, or has  
  contaminated the ground and/or vegetation, notify the competent authorities.  
- 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  
    Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with  
    eyes, skin or clothing.  
    Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.  
    Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on  
    clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash  
    thoroughly and change into clean clothing. Wash the outside of gloves before removing.  
  - 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:  
      Store under well-ventilated, cool and dry storage conditions.  
      Do not store under moist conditions.  
    - Information about storage in one common storage facility:  
      Store away from foodstuffs.  
      Do not contaminate water, food, or feed through storage and disposal.  
    - Further information about storage conditions: Store under well-ventilated, cool and dry storage conditions.  
  - 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:  
    Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact  
    with eyes, skin or clothing.
Trade name: Badge® SC  
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- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.
    - Breathing equipment: Not required.
    - Protection of hands:
      Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- 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.
  Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.
- Eye protection: Goggles recommended during refilling.
- Body protection:
  Protective work clothing
  Mixers, loaders, applicators, and other handlers must wear the following:
  - long-sleeved shirt and long pants
  - shoes plus socks
  - chemical-resistant gloves such as Natural Rubber

Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product’s concentrate. Do not reuse them.

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: Blue
      - Odor: Odorless
      - Odor threshold: Not determined.
  - pH-value at 20 °C (68 °F): 6-8
  - Change in condition
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: Undetermined.
  - Flash point: Not applicable.
  - Flammability (solid, gaseous): Not applicable.

(Contd. on page 6)
**Safety Data Sheet**  
.acc. to OSHA

**Trade name:** Badge® SC  
**EPA Registration No.:** 80289-3-10163

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### 9 Stability and reactivity

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

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

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

- **Conditions to avoid**  
  None in particular. Store under well-ventilated, cool and dry storage conditions.

- **Incompatible materials:** No further relevant information available.

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

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### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity**

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

    | Route       | Value          |
    |-------------|----------------|
    | Oral (rat)  | LD50 >2000 mg/kg |
    | Dermal (rat)| LD50 >2000 mg/kg |
    | Inhalative (rat)| LC50/4 h >3.994 mg/l  |

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
  - **Sensitization:** No sensitizing effects known.
12 Ecological information

- Toxicity
  This product is toxic to fish and aquatic invertebrates and may contaminate water through. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. 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 or rinsate.

- Aquatic toxicity: No further relevant information available.

- Persistence and degradability
  No further relevant information available.

- Other information:
  Data referred to technical Copper Oxchloride CAS: 1332-40-7
  Fish (Onchorincus mykiss): LC50 (96h): 0.217 mg Cu/L
  Freshwater invertebrate (Daphnia magna): LC50 (48h): 0.29 mg Cu/L
  Algae (Scenedesmus Subspicatus): EC50 (72h): 56.3 mg Cu/L

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

  Data referred to technical Copper Hydroxide CAS: 20427-59-2
  Fish (Onchorincus mykiss): LC50 (96h): 0.0165 mg Cu/L
  Freshwater invertebrate (Daphnia magna): LC50 (48h): 0.0422 mg Cu/L
  Algae (Scenedesmus Subspicatus): EC50 (72h): 22.5 mg Cu/L

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

- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.

- Additional ecological information:
  - General notes: Not known to be hazardous to water.

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

- Other adverse effects
  No further relevant information available.
13 Disposal considerations

- Waste treatment methods
  - Recommendation: Smaller quantities can be disposed of with household waste.

- Uncleaned packagings:
  - Recommendation:
    Disposal must be made according to official regulations.
    For rigid, non-refillable containers (2.5 to 5 gallons):
    Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinseate into application equipment or a mix tank or store rinseate 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, or, if allowed by state and local authorities, by burning. If burned, stay out of resulting smoke.

    For rigid, non-refillable containers that are too large to shake (with capacities greater than 5 gallons):
    Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinseate into application equipment or a mix tank or store rinseate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of resulting smoke.

14 Transport information

- UN-Number
  - DOT
  - ADR, IMDG, IATA: UN3082

- UN proper shipping name
  - ADR, IMDG, IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Copper Oxchloride, Copper Hydroxide)

- Transport hazard class(es)
  - ADR, IATA
    - Class: 9 Miscellaneous dangerous substances and articles
  - IMDG
    - Class: 9 Miscellaneous dangerous substances and articles
  - Packing group
    - ADR, IMDG, IATA: III

(Contd. on page 9)
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.
  The following is the hazard information as required on the pesticide label.
  - SARA Title III
    - Section 355 (extremely hazardous substances):
      None of the ingredients are listed.
    - Section 313 (Specific toxic chemical listings):
      20427-59-2 Copper hydroxide
    - TSCA (Toxic Substances Control Act):
      20427-59-2 Copper hydroxide
    - 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.

(Contd. on page 10)
* Carcinogenicity categories
  None of the ingredients are listed.

* TLV (Threshold Limit Value established by ACGIH)
  None of the ingredients are listed.

* NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients are listed.

* GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).

  * Hazard pictograms
    Not applicable

  * Signal word
    (US EPA) CAUTION

  * Hazard-determining components of labeling:
    Copper hydroxide
    Copper oxychloride

  * Hazard statements
    Not applicable
    Harmful if swallowed.

  * Precautionary statements
    Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.
    Wash thoroughly after handling.
    Do not eat, drink or smoke when using this product.

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

### 16 Other information

* Notice: The information and recommendations contained herein are provided in good faith and are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information herein.

* Department issuing SDS: Supply Chain
* Contact: sds@gowanco.com
* Date of preparation / last revision 12/14/2015 / 10
* 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)
Trade name: **Badge® SC**
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HMIS: Hazardous Materials Identification System (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
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4

* Sources **Badge®** is a registered trademark of Isagro USA, Inc.

* Data compared to the previous version altered.