

## 1 Identification

### · Product identifier

· Trade name: **Badge® SC**

· Article number: US60903-60908

· CAS Number:

EPA Registration No.: 80289-3-10163

Active Ingredients: Copper Oxychloride (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:

Gowan Company, LLC.

P.O. Box 5569

Yuma, Arizona 85366-5569

(928) 783-8844

· Information department: [sds@gowanco.com](mailto: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 (ProPharma Group®): (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)



GHS05 Corrosion

Eye Damage 1

H318 Causes serious eye damage.



GHS09 Environment

Aquatic Acute 1

H400 Very toxic to aquatic life.

Aquatic Chronic 1

H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Toxicity - Oral 4 H302 Harmful if swallowed.

### · Label elements

· GHS label elements

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

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· **Hazard pictograms**

GHS05   GHS07   GHS09

· **Signal word** Danger· **Hazard-determining components of labeling:**

Copper oxychloride

Copper hydroxide

· **Hazard statements**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear eye protection / face protection.

· **Hazard description:**

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.

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

**HAZARD INDEX:**

4 Severe Hazard

3 Serious Hazard

2 Moderate Hazard

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:** Mixture of the substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 1332-40-7	Copper oxychloride ⚠ Acute Toxicity - Oral 3, H301	16.81%
CAS: 20427-59-2	Copper hydroxide ⚠ Acute Toxicity - Inhalation 2, H330; ⚠ Eye Damage 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Toxicity - Oral 4, H302	15.36%

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## 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:

CO<sub>2</sub>, 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.

### · 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

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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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

CAS: 20427-59-2	Copper hydroxide	4.6 mg/m <sup>3</sup>
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· **PAC-2:**

CAS: 20427-59-2	Copper hydroxide	33 mg/m <sup>3</sup>
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· **PAC-3:**

CAS: 20427-59-2	Copper hydroxide	200 mg/m <sup>3</sup>
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## 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-vented, 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-vented, 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.

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- **Additional information:**

The lists that were valid during the creation were used as basis.

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

- **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.

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· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not self-igniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not determined.
· <b>Density at 20 °C (68 °F):</b>	1.36 g/cm <sup>3</sup> (11.3492 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Dispersible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Other information</b>	No further relevant information available.

## 10 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-vented, cool and dry storage conditions.
- **Incompatible materials:** No further relevant information available.
- **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	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>3.94 mg/l (rat)

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

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· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

· **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 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 Oxychloride CAS: 1332-40-7

Fish (*Onchorhynchus 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 (*Onchorhynchus 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.

· **Ecotoxicological effects:**

· **Remark:** Toxic for fish

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

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## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*

- **Uncleaned packagings:**

- **Recommendation:**

*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 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, 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 rinsate into application equipment or a mix tank or store rinsate 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** Void
- **ADR, IMDG, IATA** UN3082

- **UN proper shipping name**

- **DOT** Void
- **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.
- **IMDG, IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.

- **Transport hazard class(es)**

- **DOT**
- **Class** Void

- **ADR, IATA**



- **Class** 9 Miscellaneous dangerous substances and articles

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· <b>Label</b>	9
· <b>IMDG</b>	
	
· <b>Class</b>	9 Miscellaneous dangerous substances and articles
· <b>Label</b>	9
· <b>Packing group</b>	
· <b>DOT</b>	Void
· <b>ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>Special marking (IATA):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b>	
· <b>EMS Number:</b>	F-A,S-F
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	
Not applicable	
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	
US DOT: Non bulk: Not regulated Bulk: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. 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.

The following is the hazard information as required on the pesticide label.

#### · Marketing authorization number:

##### · SARA Title III

#### · Section 355 (extremely hazardous substances):

None of the ingredients are listed.

#### · Section 313 (Specific toxic chemical listings):

CAS: 20427-59-2 | Copper hydroxide

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<b>· TSCA (Toxic Substances Control Act):</b>	
CAS: 20427-59-2	Copper hydroxide
<i>ACTIVE</i>	

<b>· Hazardous Air Pollutants</b>
None of the ingredients are listed.

<b>· Proposition 65</b>
<b>· Chemicals known to cause cancer:</b>
None of the ingredients are listed.

<b>· Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients are listed.

<b>· Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients are listed.

<b>· Chemicals known to cause developmental toxicity:</b>
None of the ingredients are listed.

<b>· Carcinogenicity categories</b>
<b>· EPA (Environmental Protection Agency)</b>
None of the ingredients are listed.

<b>· TLV (Threshold Limit Value)</b>
None of the ingredients are listed.

<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
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

Copper hydroxide

**· Hazard statements**

Not applicable

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**· Precautionary statements**

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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P273 Avoid release to the environment.

P280 Wear eye protection / face protection.

· **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.*

*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:** Systems Design and Control

· **Contact:** sds@gowanco.com

· **Date of preparation / last revision** 10/04/2022

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Acute Toxicity - Inhalation 2: Acute toxicity – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

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