

# Safety Data Sheet

## Simulated Antigen

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Simulated Antigen  
**Recommended Use:** Science education applications  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.

**GHS Classification:**

**Other Safety Precautions:** May cause irritation.  
May cause gastrointestinal discomfort.  
May cause irritation to respiratory tract.  
May cause irritation to skin.

### Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u>                          | <u>CAS #</u> | <u>%</u> |
|---|--------------|----------|
| Water   | 7732-18-5    | 98       |
| Copper (II) sulfate pentahydrate              | 7758-99-8    | 0        |
| Contains <1% Copper (II) sulfate pentahydrate |              |          |

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Sulfur Oxides, Metal Oxides,

### Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Remove soiled clothing and launder before reuse. Avoid the generation of dusts during clean-up. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Do not flush spill to drain.

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## Section 7

## Handling and Storage

**Storage:** Keep container tightly closed in a cool, well-ventilated place.  
**Storage Code:** Green - general chemical storage

## Section 8

## Protection Information

| <b>Chemical Name</b>             | <b>ACGIH</b>                                   |               | <b>OSHA PEL</b> |               |
|----------------------------------|--|---------------|-----------------|---------------|
|                                  | <b>(TWA)</b>                                   | <b>(STEL)</b> | <b>(TWA)</b>    | <b>(STEL)</b> |
| Copper (II) sulfate pentahydrate | 1 mg/m <sup>3</sup> TWA (dust and mist, as Cu) | N/A           | N/A             | N/A           |

### Control Parameters

#### Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Good general room ventilation should be sufficient to control airborne contaminants to safe levels.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

No respiratory protection required under normal conditions of use.

#### Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

Nitrile

## Section 9

## Physical Data

**Formula:** This product is a mixture.

**Molecular Weight:**

**Appearance:** Colorless Liquid

**Odor:** No data available

**Odor Threshold:** No data available

**pH:** No data available

**Melting Point:** Estimated 0 C

**Boiling Point:** 100 C

**Flash Point:** No data available

**Flammable Limits in Air:** No data available

**Vapor Pressure:** No data available

**Evaporation Rate (BuAc=1):** No data available

**Vapor Density (Air=1):** No data available

**Specific Gravity:** No data available

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** 10

**Percent Volatile by Volume:** No data available

## Section 10

## Reactivity Data

**Reactivity:**

No data available

**Chemical Stability:**

Stable under normal conditions.

**Conditions to Avoid:**

None known.

**Incompatible Materials:**

Water-reactive materials, Strong oxidizing agents

**Hazardous Decomposition Products:**

Sulfur Oxides, Metal Oxides,

**Hazardous Polymerization:**

Will not occur

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## Section 11 Toxicity Data

**Symptoms (Acute):** No data available  
**Delayed Effects:** No data available

### Acute Toxicity:

| Chemical Name | CAS Number | Oral LD50                    | Dermal LD50 | Inhalation LC50 |
|---------------|------------|------------------------------|-------------|-----------------|
| Water         | 7732-18-5  | Oral LD50 Rat<br>90000 mg/kg |             |                 |

### Carcinogenicity:

| Chemical Name     | CAS Number | IARC       | NTP        | OSHA       |
|-------------------|------------|------------|------------|------------|
| No data available |            | Not listed | Not listed | Not listed |

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** No data available  
**Chronic:** No data available

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology. Severe ecological hazard. This product may be toxic to plants and/or wildlife. Keep out of waterways.

**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

| Chemical Name                    | CAS Number | Eco Toxicity  |
|----------------------------------|------------|---|
| Water                            | 7732-18-5  | No data available                                   |
| Copper (II) sulfate pentahydrate | 7758-99-8  | 96 HR LC50 PIMEPHALES PROMELAS 0.6752 MG/L [STATIC] |

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

**Ground - DOT Proper Shipping Name:** Not regulated for transport by US DOT.  
**Air - IATA Proper Shipping Name:** Not regulated for air transport by IATA.

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## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

| <b>Chemical Name</b> | <b>CAS Number</b> | <b>§ 313 Name</b> | <b>§ 304 RQ</b> | <b>CERCLA RQ</b> | <b>§ 302 TPQ</b> | <b>CAA 112(2) TQ</b> |
|----------------------|-------------------|-------------------|-----------------|------------------|------------------|----------------------|
| No data available    |                   | No                | No              | No               | No               | No                   |

## Section 16

## Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

|        |   |      |   |
|--------|---|------|---|
| ACGIH  | American Conference of Governmental Industrial Hygienists             | NTP  | National Toxicology Program                   |
| CAS    | Chemical Abstract Service Number                                      | OSHA | Occupational Safety and Health Administration |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL  | Permissible Exposure Limit                    |
| DOT    | U.S. Department of Transportation                                     | ppm  | Parts per million                             |
| IARC   | International Agency for Research on Cancer                           | RCRA | Resource Conservation and Recovery Act        |
| N/A    | Not Available   | SARA | Superfund Amendments and Reauthorization Act  |
|        |   | TLV  | Threshold Limit Value                         |
|        |   | TSCA | Toxic Substances Control Act                  |
|        |   | IDLH | Immediately dangerous to life and health      |