

## Aceto-Orcein Solution, 2%

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Aceto-Orcein Solution 2%

**Synonyms/Generic Names:** None

**SDS Number:** 7.00

**Product Use:** For Educational Use Only

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information Contact:** Ward's Science  
5100 West Henrietta Rd.  
PO Box 92912-9012  
Rochester, NY 14692  
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**OSHA Hazards:** Combustible liquid, Target organ effect, Harmful by skin absorption, corrosive

**Target Organs:** Teeth, Kidneys

**Signal Word:** Danger

**Pictograms:**



**GHS Classification:**

|                            |             |
|----------------------------|-------------|
| Flammable liquids          | Category 3  |
| Acute toxicity, Oral       | Category 5  |
| Acute toxicity, Inhalation | Category 3  |
| Acute toxicity, Dermal     | Category 4  |
| Skin corrosion             | Category 1A |
| Serious eye damage         | Category 1  |
| Skin sensitization         | Category 1  |
| Acute aquatic toxicity     | Category 3  |

## GHS Label Elements, including precautionary statements:

### Hazard Statements:

|      |  |
|------|--|
| H226 | Flammable liquid and vapor.              |
| H303 | May be harmful if swallowed.             |
| H312 | Harmful in contact with skin.            |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction.     |
| H331 | Toxic if inhaled.                        |
| H402 | Harmful to aquatic life.                 |

### Precautionary Statements:

|                |  |
|----------------|--|
| P261           | Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  |
| P280           | Wear protective gloves/ protective clothing/ eye protection/ face protection.  |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER or doctor/ physician.   |

### Potential Health Effects

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Causes eye irritation.   |
| <b>Inhalation</b> | May be harmful if inhaled. Causes respiratory tract irritation.  |
| <b>Skin</b>       | May be harmful if absorbed through skin. Causes skin irritation. |
| <b>Ingestion</b>  | May be harmful if swallowed.                                     |

### NFPA Ratings

|                        |               |
|------------------------|---------------|
| <b>Health</b>          | 2             |
| <b>Flammability</b>    | 3             |
| <b>Reactivity</b>      | 0             |
| <b>Specific hazard</b> | Not Available |

### HMIS Ratings

|                   |   |
|-------------------|---|
| <b>Health</b>     | 2 |
| <b>Fire</b>       | 3 |
| <b>Reactivity</b> | 0 |
| <b>Personal</b>   | H |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component   | Weight % | CAS #     | EINECS# / ELINCS# | Formula   | Molecular Weight |
|-------------|----------|-----------|-------------------|---|------------------|
| Acetic Acid | 50       | 64-19-7   | 200-580-7         | CH <sub>3</sub> COOH  | 60.05 g/mol      |
| Orcein      | 2        | 1400-62-0 | 215-62-0          | C <sub>28</sub> H <sub>24</sub> N <sub>2</sub> O <sub>7</sub> | 500.51 g/mol     |
| Water       | Balance  | 7732-18-5 | 231-791-2         | H <sub>2</sub> O  | 18.00 g/mol      |

## 4. FIRST-AID MEASURES

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Rinse with plenty of water for at least 15 minutes and seek medical attention.   |
| <b>Inhalation</b> | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. |
| <b>Skin</b>       | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.            |
| <b>Ingestion</b>  | <b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.      |

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## 5. FIRE-FIGHTING MEASURES

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|  |  |
|--|--|
| <b>Suitable (and unsuitable) extinguishing media</b>                 | Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use appropriate media for adjacent fire. Cool unopened containers with water. |
| <b>Special protective equipment and precautions for firefighters</b> | Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.  |
| <b>Specific hazards arising from the chemical</b>                    | Emits toxic fumes (carbon oxides, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).   |

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## 6. ACCIDENTAL RELEASE MEASURES

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|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | See section 8 for recommendations on the use of personal protective equipment.  |
| <b>Environmental precautions</b>   | Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.   |
| <b>Methods and materials for containment and cleaning up</b>               | Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations. |

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## 7. HANDLING AND STORAGE

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### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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**Occupational exposure controls:** Ventilation and appropriate grounding of containers.

| Component   | Exposure Limits                | Basis | Entity |
|-------------|--------------------------------|-------|--------|
| Acetic Acid | 10 ppm<br>25 mg/m <sup>3</sup> | PEL   | OSHA   |
|             | 10 ppm<br>25 mg/m <sup>3</sup> | TLV   | ACGIH  |
|             | 15 ppm<br>37 mg/m <sup>3</sup> | STEL  | ACGIH  |
|             | 10 ppm<br>25 mg/m <sup>3</sup> | REL   | NIOSH  |
|             | 15 ppm<br>37 mg/m <sup>3</sup> | STEL  | NIOSH  |

TWA: Time Weighted Average over 8 hours of work.  
 TLV: Threshold Limit Value over 8 hours of work.  
 REL: Recommended Exposure Limit  
 PEL: Permissible Exposure Limit  
 STEL: Short Term Exposure Limit during x minutes.  
 IDLH: Immediately Dangerous to Life or Health  
 WEEL: Workplace Environmental Exposure Levels  
 CEIL: Ceiling

#### Personal Protection

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Wear chemical safety glasses or goggles, and face shield.  |
| <b>Inhalation</b> | Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.  |
| <b>Skin</b>       | Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| <b>Other</b>      | Not Available  |

#### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|   |                                     |
|---|-------------------------------------|
| Appearance (physical state, color, etc.)    | Dark red, opaque liquid.            |
| Odor  | Not Available                       |
| Odor threshold                              | Not Available                       |
| pH  | Not Available                       |
| Melting point/freezing point                | Not Available                       |
| Initial boiling point and boiling range     | Not Available                       |
| Flash point                                 | Not Available                       |
| Evaporation rate                            | Not Available                       |
| Flammability (solid, gas)                   | Flammable                           |
| Upper/lower flammability or explosive limit | Not Available                       |
| Vapor pressure                              | Not Available                       |
| Vapor density                               | Not Available                       |
| Density                                     | 1.001 g/cm <sup>3</sup> (water = 1) |
| Solubility (ies)                            | Not Available                       |
| Partition coefficient: n-octanol/water      | Not Available                       |
| Auto-ignition temperature                   | Not Available                       |
| Decomposition temperature                   | Not Available                       |

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## 10. STABILITY AND REACTIVITY

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|   |   |
|---|---|
| <b>Chemical Stability</b>                 | Stable  |
| <b>Possibility of Hazardous Reactions</b> | Will not occur.   |
| <b>Conditions to Avoid</b>                | Heat, flames, sparks.   |
| <b>Incompatible Materials</b>             | Oxidizing agents, soluble carbonates and phosphates, hydroxides, metals, peroxides, permanganates, e.g. potassium permanganate, amines, alcohols. |
| <b>Hazardous Decomposition Products</b>   | Carbon oxides.  |

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

|                    |               |
|--------------------|---------------|
| <b>Skin</b>        | Not Available |
| <b>Eyes</b>        | Not Available |
| <b>Respiratory</b> | Not Available |
| <b>Ingestion</b>   | Not Available |

### Carcinogenicity

|              |  |
|--------------|--|
| <b>IARC</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>ACGIH</b> | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.            |
| <b>NTP</b>   | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |
| <b>OSHA</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |

### Signs & Symptoms of Exposure

|                    |   |
|--------------------|---|
| <b>Skin</b>        | Reddening, itching, inflammation. May cause blistering, tissue damage and burns.  |
| <b>Eyes</b>        | Irritation, lacrimation, redness, pain. May cause burns, blurred vision, conjunctivitis, conjunctival and corneal destruction and permanent injury.   |
| <b>Respiratory</b> | Rhinitis, sneezing, coughing, oppressive feeling in the chest or chest pain, dyspnea, wheezing, tachypnea, cyanosis, salivation, nausea, giddiness, muscular weakness. May cause chemical pneumonitis, bronchitis, and pulmonary edema. |
| <b>Ingestion</b>   | Burning and pain of the mouth, throat, and abdomen, coughing, ulceration, bleeding, nausea, abdominal spasms, vomiting, hematemesis, diarrhea. May also affect liver, behavior, and urinary system.                                     |

|                                       |   |
|---------------------------------------|---|
| <b>Chronic Toxicity</b>               | Chronic exposure to acetic acid via ingestion may cause blackening or erosion of the teeth and jaw necrosis, pharyngitis, and gastritis. It may also behavior (similar to acute ingestion), and metabolism (weight loss). Chronic exposure via inhalation may cause asthma and/or bronchitis with cough, phlegm, and/or shortness of breath. Repeated or prolonged skin contact may cause thickening, blackening, and cracking of the skin. |
| <b>Teratogenicity</b>                 | Not Available   |
| <b>Mutagenicity</b>                   | Not Available   |
| <b>Embryotoxicity</b>                 | Not Available   |
| <b>Specific Target Organ Toxicity</b> | Not Available   |
| <b>Reproductive Toxicity</b>          | Not Available   |
| <b>Respiratory/Skin Sensitization</b> | May cause sensitization by skin contact.  |

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

|                             |               |
|-----------------------------|---------------|
| <b>Aquatic Vertebrate</b>   | Not Available |
| <b>Aquatic Invertebrate</b> | Not Available |
| <b>Terrestrial</b>          | Not Available |

|                                      |               |
|--------------------------------------|---------------|
| <b>Persistence and Degradability</b> | Not Available |
| <b>Bioaccumulative Potential</b>     | Not Available |
| <b>Mobility in Soil</b>              | Not Available |
| <b>PBT and vPvB Assessment</b>       | Not Available |
| <b>Other Adverse Effects</b>         | Not Available |

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### 13. DISPOSAL CONSIDERATIONS

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|                           |   |
|---------------------------|---|
| <b>Waste Residues</b>     | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues. |
| <b>Product Containers</b> | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.    |

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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### 14. TRANSPORTATION INFORMATION

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|                  |   |
|------------------|---|
| US DOT           | UN2790, Acetic acid solution, 8, pg III |
| TDG              | UN2790, ACETIC ACID SOLUTION, 8, PG III |
| IMDG             | UN2790, ACETIC ACID SOLUTION, 8, PG III |
| Marine Pollutant | No                                      |
| IATA/ICAO        | UN2790, Acetic acid solution, 8, pg III |

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### 15. REGULATORY INFORMATION

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|                           |   |
|---------------------------|---|
| TSCA Inventory Status     | All ingredients are listed on the TSCA inventory.   |
| DSCL (EEC)                | All ingredients are listed on the DSCL inventory.   |
| California Proposition 65 | Not Listed  |
| SARA 302                  | Not Listed  |
| SARA 304                  | Not Listed  |
| SARA 311                  | Acetic Acid   |
| SARA 312                  | Acetic Acid   |
| SARA 313                  | Not Listed  |
| WHMIS Canada              | Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).<br>Class E: Corrosive liquid. |

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### 16. OTHER INFORMATION

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| Revision   | Date       |
|------------|------------|
| Revision 1 | 12/26/2012 |
| Revision 2 | 07/10/2013 |
|            |            |

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