



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. CC 531  
Effective Date February 17, 1999

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

|                          |                                |  |                   |   |
|--------------------------|--------------------------------|--|-------------------|---|
| <b>Product</b>           | CUPRIC SULFATE, ANHYDROUS      |  | <b>Health</b>     | 2 |
| <b>Chemical Synonyms</b> | Copper (II) Sulfate, Anhydrous |  | <b>Fire</b>       | 0 |
| <b>Formula</b>           | CuSO <sub>4</sub>              |  | <b>Reactivity</b> | 0 |
| <b>Unit Size</b>         | up to 2.5 Kg.                  |  |                   |   |
| <b>C.A.S. No.</b>        | 7758-98-7                      |  |                   |   |

## SECTION II INGREDIENTS OF MIXTURES

| Principal Component(s) | %       | TLV Units      |
|------------------------|---------|----------------|
| Copper (II) Sulfate    | 90-100% | See Section V. |

**WARNING! HARMFUL IF SWALLOWED OR INHALED.**

**IRRITANT TO SKIN, EYES AND MUCOUS MEMBRANES.**

## SECTION III PHYSICAL DATA

|                        |                                    |   |      |
|------------------------|------------------------------------|---|------|
| Melting Point (°F)     | 340°C (644°F)                      | Specific Gravity (H <sub>2</sub> O = 1) | 3.60 |
| Boiling Point (°F)     | N/A                                | Percent Volatile by Volume (%)          | N/A  |
| Vapor Pressure (mm Hg) | N/A                                | Evaporation Rate (=1)                   | N/A  |
| Vapor Density (Air=1)  | N/A                                |   |      |
| Solubility in Water    | Appreciable.                       |   |      |
| Appearance & Odor      | Off white to grey powder; no odor. |   |      |

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

|                                  |   |                                     |     |       |       |
|----------------------------------|---|-------------------------------------|-----|-------|-------|
| <b>Flash Point (Method Used)</b> | Non-flammable.  | Flammable Limits in Air % by Volume | N/A | Lower | Upper |
| <b>Extinguisher Media</b>        | Use any media suitable for extinguishing supporting fire. |                                     |     |       |       |

### SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, firefighters should wear protective clothing and a NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in positive pressure mode. Cupric Sulfate will not burn, nor will it support combustion. Care should be used to keep material out of streams or other water bodies.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 171)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products as dust or fume.

## SECTION V HEALTH HAZARD DATA

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|                                |  |
|--------------------------------|--|
| <b>Threshold Limited Value</b> | (Air) As copper metal (dust and mist): 1.0 mg/m <sup>3</sup> .<br>Copper (fume) TLV 0.2 mg/m <sup>3</sup> . Toxicity data: orl-rat LD50 300 mg/kg. |
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|                                |  |
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| <b>Effects of Overexposure</b> | <b>TARGET ORGANS AFFECTED:</b> Eyes, skin, blood, respiratory system, liver, kidneys. <b>INGESTION:</b> Copper salts impart a metallic taste in mouth. May cause gastrointestinal irritation and vomiting. <b>EYES:</b> Causes conjunctivitis, swelling of the eyelids, ulceration and burns of the cornea. <b>SKIN:</b> Causes irritation. May cause allergic skin reaction. <b>INHALATION:</b> Causes upper respiratory irritation and congestion of the nasal and mucous membranes. |
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| <b>Emergency and First Aid Procedures</b> | <b>INHALATION:</b> Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. <b>EYES:</b> Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. <b>SKIN:</b> Flush with water, then wash with mild soap and water. <b>INGESTION:</b> If swallowed, if conscious, give one or two glasses of water, induce vomiting and call a physician. Never give anything by mouth to an unconscious person. |
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## SECTION VI REACTIVITY DATA

|                  |                 |   |                            |  |
|------------------|-----------------|---|----------------------------|--|
| <b>Stability</b> | <b>Unstable</b> |   | <b>Conditions to Avoid</b> | Excessive temperature and heat.          |
|                  | <b>Stable</b>   | X |                            | Slowly effloresces in the air. Moisture. |

|   |  |
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| <b>Incompatibility (Materials to Avoid)</b> | Acetylene, Reducing agents, Hydroxylamine. |
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|---|---------------------------------|
| <b>Hazardous Decomposition Products</b> | Oxides of sulfur, copper fumes. |
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|                                 |                            |
|---------------------------------|----------------------------|
| <b>Hazardous Polymerization</b> | <b>Conditions to Avoid</b> |
| <b>May Occur</b>                | <b>Will Not Occur</b>      |
|                                 | X                          |
|                                 | Not applicable.            |

## SECTION VII SPILL OR LEAK PROCEDURES

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| <b>Steps to be taken in case material is released or spilled</b> | Reclaim as much as possible. Sprinkle lime or soda ash on spill to form insoluble copper salt. Sweep up and place in a suitable container for disposal. Wash spill area with soap and water. Prevent material from entering waterways. |
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| <b>Waste Disposal Method</b> | Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. |
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Dispose of in an approved chemical landfill or contract with a licensed waste disposal agency.

## SECTION VIII SPECIAL PROTECTION INFORMATION

|  |  |                     |                |     |
|--|--|---------------------|----------------|-----|
| <b>Respiration Protection (Specify Type)</b> | None should be required in normal laboratory use. If dusty conditions prevail, work in a ventilation hood or wear a NIOSH/MSHA-approved dust mask. |                     |                |     |
| <b>Ventilation</b>                           | <b>Local Exhaust</b>   | <b>Recommended.</b> | <b>Special</b> | No. |
|  | <b>Mechanical (General)</b>  | <b>Recommended.</b> | <b>Other</b>   | No. |

|                          |         |                       |                          |
|--------------------------|---------|-----------------------|--------------------------|
| <b>Protective Gloves</b> | Rubber. | <b>Eye Protection</b> | Chemical safety glasses. |
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|                                   |   |
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| <b>Other Protective Equipment</b> | Safety glasses, smock, apron, ventilation hood, proper gloves, eye wash station, safety shower. |
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## SECTION IX SPECIAL PRECAUTIONS

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| <b>Precautions to be Taken in Handling &amp; Storing</b> | Store in a cool, dry place. Wash thoroughly after handling. Keep container tightly closed when not in use. |
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| <b>Other Precautions</b> | Read label on container before using. Do not wear contact lenses when working with chemicals. Material is hygroscopic. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Use with adequate ventilation. Remove and wash contaminated clothing. |
|--------------------------|--|

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

|                       |                     |                                 |                                       |
|-----------------------|---------------------|---------------------------------|---------------------------------------|
| <b>Revision</b> No. 7 | <b>Date</b> 2/17/99 | <b>Approved</b> Michael Raszeja | <b>Chemical Safety Coordinator</b> MR |
|-----------------------|---------------------|---------------------------------|---------------------------------------|

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D.O.T. RQ Environmentally hazardous substance, solid, n.o.s., (Cupric sulfate), 9, UN 3077, PG III

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20