



## PRODUCT STEWARDSHIP SUMMARY

### *Copper nitrate solutions*

#### 1. Chemical identity

- Copper nitrate, C.A.S. No. 3251-23-8, Chemical formula  $\text{Cu}(\text{NO}_3)_2$
- Water, C.A.S. No. 7732-18-5, Chemical formula  $\text{H}_2\text{O}$
- Nitric Acid, C.A.S. No. 7697-37-2, Chemical formula  $\text{HNO}_3$

#### 2. Uses and Applications

Copper nitrate solutions are used in electroplating applications, as well as in the manufacture of enamels, cleaners, and dyes.

#### 3. Physical / Chemical Properties

Copper nitrate solutions are blue transparent liquids with a slight odor of nitric acid. They are normally stable. Copper nitrate solutions are corrosive and may produce oxides of nitrogen upon thermal decomposition.

#### 4. Globally Harmonized System (GHS) Classifications



Danger. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

#### 5. Exposure

Exposure to copper nitrate solutions may occur in industrial applications where engineering controls have failed or are not in place. Exposure can also result when safe work procedures are not followed, or workers do not use personal protective equipment. Exposure to copper nitrate solutions may occur during environmental releases if response operations are not conducted properly or in a timely manner.

#### 6. Risk Management



Engineering controls such as exhaust ventilation, dedicated closed systems, leak detection, welded joints, and properly designed storage equipment are recommended to minimize the risk of exposure to copper nitrate solutions. Safe work practices and worker training on the handling of corrosive liquids is also recommended. Personal protective equipment such as safety glasses, impervious gloves, respirators, and work uniforms are necessary to prevent worker exposure. In the event of an environmental release of copper nitrate solutions, emergency personnel should follow appropriate emergency response guidelines for corrosive liquids and wear adequate protective equipment to minimize exposure during response operations.

## 7. Additional Information

- The Shepherd Chemical Company Material Safety Data Sheets, [www.shepchem.com](http://www.shepchem.com)
- Hazardous Substance Data Bank (HSDB), <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>

## 8. Contact Information

For more information, call (513) 458-6847 or email [bpelsor@shepchem.com](mailto:bpelsor@shepchem.com)