

Citric acid USAGE POLICY

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NFPA Rating

Health Hazard: 2

Fire: 0

Flammability: 0 Reactivity :0 Hazard: 1

Physical hazards: 1

HEALTH HAZARDS

•**Eye:** Causes severe eye irritation and possible injury.

Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Excessive intake of citric acid may cause erosion of the teeth.

Inhalation: Causes respiratory tract irritation.

Chronic: Repeated exposure may cause sensitization dermatitis.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

CONDITIONS TO AVOID

Incompatible materials, dust generation, moisture, exposure to moist air or water.

PERSONAL PROTECTION

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

FIRE FIGHTING MEASURES

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician

USERS

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REFERENCES

- 1) <http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=251275&brand=SIAL&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Fsial%2F251275%3Flang%3Den>
- 2) http://avogadro.chem.iastate.edu/MSDS/citric_acid.htm