


MATERIAL SAFETY DATA SHEET

Citric acid, anhydrous

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| MSDS Name: | Citric acid, anhydrous |
| Synonyms: | 2-Hydroxy-1,2,3-propanetricarboxylic acid |
| Company Identification: (INDIA) | Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA |
| For information in the INDIA, call: | Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001 |

Section 2 - Composition, Information on Ingredients

| CAS# | Chemical Name: | % | EINECS# |
|---------|------------------------|-----|-----------|
| 77-92-9 | Citric acid, anhydrous | 99% | 201-069-1 |

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| Hazard Symbols: | XI |
|  | |
| Risk Phrases: | 36/37/38 |

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin.

Potential Health Effects

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| Eye: | Causes severe eye irritation. |
| Skin: | Causes moderate skin irritation. |
| Ingestion: | May cause gastrointestinal irritation with nausea, vomiting and diarrhea. |
| Inhalation: | Causes respiratory tract irritation. |
| Chronic: | |

Section 4 - First Aid Measures

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| Eyes: | Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. |
| Skin: | Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. |
| Ingestion: | Get medical aid. Wash mouth out with water. |
| Inhalation: | Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. |
| Notes to Physician: | |

Section 5 - Fire Fighting Measures

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| General Information: | As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. |
| Extinguishing Media: | Use water spray, dry chemical, carbon dioxide, or chemical foam. |

Section 6 - Accidental Release Measures

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| General Information: | Use proper personal protective equipment as indicated in Section 8. |
| Spills/Leaks: | Vacuum or sweep up material and place into a suitable disposal container. |

Section 7 - Handling and Storage

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| Handling: | Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. |
| Storage: | Store in a cool, dry place. Store in a tightly closed container. |

Section 8 - Exposure Controls, Personal Protection

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| Engineering Controls: | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. |
| Exposure Limits | |

Personal Protective Equipment

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| Eyes: | Wear chemical splash goggles. |
| 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 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |

Section 9 - Physical and Chemical Properties

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| Physical State: | Crystals |
| Color: | white |
| Odor: | odorless |
| pH: | Not available |
| Vapor Pressure: | Not available |
| Viscosity: | Not available |
| Boiling Point: | Not available |
| Freezing/Melting Point: | 153 - 154.5 deg C |
| Autoignition Temperature: | 1000 deg C (1,832.00 deg F) |
| Flash Point: | 100 deg C (212.00 deg F) |
| Explosion Limits: Lower: | Not available |
| Explosion Limits: Upper: | Not available |
| Decomposition Temperature: | Not available |
| Solubility in water: | 750 g/L (20°C) |
| Specific Gravity/Density: | |
| Molecular Formula: | C6H8O7 |

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| Molecular Weight: | 192.13 |
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Section 10 - Stability and Reactivity

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| Chemical Stability: | Stable under normal temperatures and pressures. |
| Conditions to Avoid: | Incompatible materials, exposure to moist air or water. |
| Incompatibilities with Other Materials | Oxidizing agents, reducing agents, bases, metal nitrates. |
| Hazardous Decomposition Products | Carbon monoxide, carbon dioxide. |
| Hazardous Polymerization | Will not occur. |

Section 11 - Toxicological Information

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| RTECS#: | CAS# 77-92-9: GE7350000 |
| LD50/LC50: | RTECS: CAS# 77-92-9: Draize test, rabbit, eye: 750 ug/24H Severe; Draize test, rabbit, skin: 500 mg/24H Mild; Oral, mouse: LD50 = 5040 mg/kg; Oral, rat: LD50 = 3 gm/kg; Other: |
| Carcinogenicity: | Citric acid, anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. |
| Other: | See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated. |

Section 12 - Ecological Information

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| Ecotoxicity: | Fish: Leuciscus idus: LC50: 440-760 mg/L; 96h; Daphnia: Daphnia: EC50: 120 mg/L; 72h; . |
| Other: | Biodegradable. Log Pow: -1.72 |

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

| | IATA | IMO | RID/ADR |
|-----------------------|----------------|----------------|----------------|
| Shipping Name: | Not regulated. | Not regulated. | Not regulated. |
| Hazard Class: | | | |
| UN Number: | | | |
| Packing Group: | | | |

Section 15 - Regulatory Information

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| European/International Regulations |
| European Labeling in Accordance with EC Directives |
| Hazard Symbols: XI |
| Risk Phrases: |
| ➤ R 36/37/38 Irritating to eyes, respiratory system and skin. |
| Safety Phrases: |
| ➤ S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| ➤ S 37/39 Wear suitable gloves and eye/face protection. |
| WGK (Water Danger/Protection) |
| ➤ CAS# 77-92-9: 0 |
| Canada |
| ➤ CAS# 77-92-9 is listed on Canada's DSL List |

US Federal

- TSCA
- CAS# 77-92-9 is listed on the TSCA Inventory

Section 16 - Other Information

MSDS Creation Date: July 22, 2015

Revision #0 Date

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