



BASP CHEMICAL PRODUCTS LTD.

MATERIAL SAFETY DATA SHEET

CITRIC ACID – MSDS

Chemical Product and Company Identification

Product Name : Citric Acid
Chemical Name : Citric Acid
Chemical Formula : C₆H₈O₇
Distributor : **BASP Chemical Products Limited**
Address : 105/106 Parshwa Chamber, 17/21 Issaji Street, Vadgadi,
Mumbai – 400 003, INDIA
Telephone : (+91)-22-23449557,66312930
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Composition and information of Ingredients

COMPOSITION		
Name	CAS #	% by Weight
Citric acid	77-92-9	100
Toxicological Data on Ingredients: Citric acid: ORAL (LD50): Acute: 5040 mg/kg		

Hazardous Identification

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not



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available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:

In case of skin contact, immediately flush skin with plenty of water for 15 minutes. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used, washing clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled by mistake, get some fresh air immediately. If the person is not able to breath, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Not available.

Ingestion:

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantity of material is swallowed, call a physician immediately.



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Fire and Explosion Data

Flammability of the Product :Non-Flammable
Auto – Ignition Temperature :Decomposes
Flash Points :Not Applicable
Flammable Limits :Not Applicable
Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances: Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures.

Special Remarks on Explosion Hazards: Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles



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such as oxidizing agents, reducing agents, metals, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Exposure Control / Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Gloves (impervious). Dust respirator. Be sure to use an approved/certified respirator or equivalent. The dust respirator should be used for conditions where exposure has exceeded recommended exposure limits, dust is apparent, and engineering controls (adequate ventilation) are not feasible.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product

Exposure Limits: Consult local authorities for acceptable exposure limits

Physical and Chemical Properties

Physical State and appearance:	Solid. (Crystalline powder)
Odor:	Odorless
Taste:	Acid. (Strong.)
Molecular Weight:	192.13 g/mole
Color:	Not available.
pH (1% soln/water):	Not available
Boiling Point:	Decomposes.
Melting / Freezing Point:	153°C (307.4°F)
Critical Temperature:	Not available

Solubility in Water: Soluble in cold water, hot water, diethyl ether. Insoluble in benzene.

Vapor Pressure (mmHg): Not applicable.

Vapor Density (Air=1): Not applicable.

Volatility: Not applicable.



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Odor Threshold:	Not available.
Water / Oil Dist. Coeff.:	The product is more soluble in water; $\log(\text{oil/water}) = -1.7$
Dispersion Properties:	See solubility in water, diethyl ether.
Solubility in solvents:	Not applicable.

Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, metals, alkalis.

Corrosivity: Corrosive in presence of aluminum, of zinc, of copper. Non-corrosive in presence of glass.

Special Remarks on Reactivity: Incompatible with oxidizing agents, potassium tartrate, alkali, alkaline earth carbonates and bicarbonates, acetates, and sulfides, metal nitrates

Special Remarks on Corrosivity: Will corrode copper, zinc, aluminum and their alloys.

Polymerization: Will not occur.

Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Not Available.

Chronic Effects on Humans: May cause damage to the following organs: teeth.

Other Toxic Effects on Humans: Hazardous in case of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion.

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: Causes mild to moderate skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Eyes: Causes moderate to severe eye irritation and possible injury. Ingestion: May cause gastrointestinal (digestive) tract

irritation with nausea, vomiting, diarrhea. Excessive intake may cause erosion of teeth and



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hypocalcemia (calcium deficiency in blood). May affect behavior/central nervous system (tremor, convulsions, muscle contraction or spasticity). Inhalation: Causes moderate respiratory tract and mucous membrane irritation. Chronic Potential Health Effects: Frequent intake of citrated beverages may cause erosion of dental enamel and irritation of mucous membranes.

Ecological Information

Ecotoxicity: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Disposal Consideration

Product Disposal:

Untreated waste must never be discharged directly in to the sewers. Review National / Regional regulations.

Packaging Disposal:

Packing material does not get contaminated & can be disposed off by usual methods in accordance with National / Regional requirements.

Transport Information

Road & Rail Transport	:Not available.
GGVE / GGVS	:Not applicable
IMDG	:Not applicable
Air Transport	:Not applicable
P Phrases	:Not applicable
S Phrases	:Not applicable



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Regulatory Information

Health and safety information: CLASS E: Corrosive solid.

Protective Equipment:

Gloves (impervious). Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall **BASP Chemical Products Limited** be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if **BASP Chemical Products Limited** has been advised of the possibility of such damages.