Safety Data Sheet
(CITRIC ACID MONOHYDRATE)

1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ..... CITRIC ACID MONOHYDRATE
CHEMICAL NAME/
CLASS/SYNONYMS: None
PRODUCT NUMBER: ..... CITRIC ACID MONOHYDRATE
UN/NA NUMBER: ..... None
CHEMICAL FAMILY: ..... Compounds, Cleaning Liquid
CAS NUMBER: 5949-29-1
FORMULA: ..... Proprietary

COMPANY: ..... **JMN Specialties, Inc.**
1100 Victory Drive – Westwego, Louisiana USA 70094
Phone (504) 341-3749, Fax (504) 341-5868
www.jmnspecialties.com
EMERGENCY PHONE: ..... CALL CHEMTEL: Toll Free US & Canada: (800) 255-3924, Outside USA +01-813-248-0585.
DATE PREPARED: ..... February 28, 2019

2 – HAZARDS IDENTIFICATION

GHS HAZARD CLASSIFICATION:

Physical Hazards
Flammable Liquids: ..... . No hazard statement
Health Hazards
Acute Toxicity (Oral): ..... . Category 4 - Harmful if swallowed, in contact with skin, inhaled
Skin Corrosion/Irritation: ..... . Catagory 2 - Causes skin irritation
Serious Eye Damage/Irritation: Catagory 2A - Causes eye irritation
Aspiration Hazard: ..... . Catagory 2 - May be harmful if swallowed and enters airways.

WARNING LABEL ITEMS INCLUDING PRECAUTIONARY STATEMENTS:

Pictograms:

SIGNAL WORD: ..... DANGER!

GHS HAZARD AND PRECAUTIONARY STATEMENTS:

H303 H313 H333: May be harmful if swallowed, in contact with skin or if inhaled

P101+102+103: If medical advice is needed, have product container or label at hand. Keep out of the reach of children. Read label before use.
P202+270+280+281: Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.

P501: Dispose of contents/container: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

TOTAL VOC's: None

3 – COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	PERCENT	CAS NUMBER
Citric Acid	95 - 100	5949-29-1

4 – FIRST-AID MEASURES

BREATHING (INHALATION): Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial resuscitation. Keep person warm and at rest. Treat symptomatically and supportively. Seek medical attention immediately. Qualified medical personnel should consider administering oxygen.

SWALLOWING (INGESTION): Give large amounts of fresh water or milk immediately. Do not give anything by mouth if person is unconscious or otherwise unable to swallow. If vomiting occurs, keep head below hips to prevent aspiration. Treat symptomatically and supportively. Seek medical attention immediately.

EYES: ..... Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

SKIN (DERMAL):..... Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

NOTE TO PHYSICIAN: ..... All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5 – FIRE-FIGHTING MEASURES

GENERAL FIRE HAZARDS: .... Testing (ASTM D4206) has shown product does not sustain combustion.

AUTOIGNITION TEMP: No Data Available

EXTINGUISHING MEDIA: Determined by surrounding material. In case of fire, use water fog, dry chemical, CO_2, or "alcohol" foam.

SPECIAL FIRE FIGHTING PROCEDURES: Spilled product on ground may be slippery.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers may explode from internal pressure if confined to fire. Cool with water spray.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: Wear appropriate personal protective equipment before approaching spill site. For small spills, dilute with water to sewer if allowed by local and state regulations. If unable to wash product with water, absorb with inert material (sand or other approved material) and dispose of in accordance with applicable regulations.

WASTE DISPOSAL: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

RCRA STATUS: If discarded in its purchased form, it is not a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product should be classified as a hazardous waste. (40CFR261.20-24).

7 – HANDLING and STORAGE

STORAGE: Keep in a tightly closed container, stored in a cool, dry, ventilated area below 44°C (110°F). Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Drum must not be washed out or used for other purposes.

HANDLING: Avoid contact with eyes, skin and clothing. Do not inhale vapors and fumes. Wash thoroughly after handling. Use only with adequate ventilation. Do not take internally. For industrial use only.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

HAZARDOUS INGREDIENT	PEL	TLV-TWA
Citric Acid	None Established	None Established

EXPOSURE CONTROLS: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

PROTECTIVE CLOTHING: **Eye/face protection:** Wear chemical goggles; face shield (if splashing is possible). **Skin protection:** Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron or chemical suit and chemical resistant boots are recommended.

ADDITIONAL MEASURES: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

9 – PHYSICAL / CHEMICAL PROPERITES

BOILING POINT: 347°F (175°C)
FREEZING POINT: No Data Available
FLASHPOINT:..... Non-flammable material
UPPER FLAME LIMIT (%): ..... No Data Available
LOWER FLAME LIMIT (%): ... No Data Available
VAPOR PRESSURE: No data available
VAPOR DENSITY (AIR=1):..... > 1
SPECIFIC GRAVITY: 1.542
pH: ..... 1 - 3
SOLUBILITY IN WATER:..... Complete
VOLATILITY
INCLUDING WATER: 12.86 pounds per gallon
MOLECULAR WEIGHT: ..... NA
EVAPORATION RATE: No data available
PHYSICAL STATE: ..... Liquid
COLOR: ..... White (Granular or Powder)
ODOR:..... Bland, Acidic

10 – STABILITY and REACTIVITY

STABILITY:..... Stable
HAZARDOUS DECOMP.:..... Will not occur
INCOMPATIBILITY:..... Aqueous solutions of Citric Acid can, if in contact with reactive metals (iron, zinc, or aluminum), form hydrogen which may form explosive mixtures.
HAZARDOUS REACTIONS: Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).

11 – TOXICOLOGICAL INFORMATION

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. **ACGIH**: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. **NTP**: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. **OSHA**: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

THRESHOLD LIMIT VALUE:.. None Established for this Product
OSHA PEL:..... None Established for this Product
LISTED CARCINOGEN: This product IS NOT listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA.
MEDICAL CONDITION AGGRAVATED: Existing dermatitis.

INFORMATION ON ACUTE TOXICOLOGICAL EFFECTS

ORAL
Product:..... Severe irritant to mucous membranes and may cause perforation of the esophagus and stomach. Abdominal pain, nausea, vomiting, general gastro-intestinal upset can be expected.
DERMAL
Product:..... Irritant, possibly corrosive if contact is prolonged. Skin contact may aggravate existing dermatitis.
INHALATION
Product:..... Respiratory tract irritant, may cause burns on acute contact.
REPEATED DOSE TOXICITY
Product:.....
SKIN CORROSION / IRRITATION
Product:..... Repeated and prolonged exposure to concentrated material may cause dermatitis.
SERIOUS EYE DAMAGE / IRRITATION
Product:..... Irritant, possibly corrosive to eye tissues. Tearing, redness, pain, impaired vision are symptoms.
RESPIRATORY OR SKIN SENSITIZATION
Product:..... Not expected to be sensitizing based on tests of this product, components, or similar products.

MUTAGENCITY

IN VITRO
Product:..... No Data Available
IN VIVO
Product:..... No Data Available

Specified Substance(s)	**Information as provided by manufacturer**
Citric Acid	No Data Available

CARCINOGENICITY
Product:..... Based on available data the classification criteria are not met. Not classified as hazardous.
REPODUCTIVE TOXICITY
Product:..... Based on available data the classification criteria are not met. Not classified as hazardous.
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE
Product: **GENERAL:** This product contains acids that are corrosive and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to these irritating effects. **INHALATION:** Inhalation of excessive concentrations of mist or vapor can cause severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and a choking sensation. If inhaled deeply, edema of the lungs may occur. **EYES:** Contact with this product, either in gas or in solution, can cause severe irritation and painful burns of the eyes and eyelids. The acid MUST be removed quickly with thorough irrigation with water or there may be prolonged or permanent visual impairment or total loss of sight. **SKIN:** Concentrated solutions are destructive to clothing and on contact with skin, can cause severe burns unless promptly washed off. **INGESTION:** This product, when swallowed, can cause severe burns of the mucous membranes of the mouth, esophagus and stomach.
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE
Product:..... The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposure. This product may aggravate existing eye, skin, and respiratory conditions.
ASPIRATION HAZARD
Product:..... Droplets of the product aspirated into the lungs through ingestion or vomiting may cause chemical pneumonia.
OTHER ADVERSE EFFECTS
Product:..... Negligible ecotoxicity

12 – ECOLOGICAL INFORMATION

ACUTE TOXICITY

FISH
Product:..... LC50 - Leuciscus idus melanotus - 440 mg/l - 48 hour
AQUATIC INVERTEBRATES
Product:..... Toxicity to daphnia and other aquatic invertebrates static test - Daphnia magna (Water flea) - 1,535 mg/l - 24 hour

CHRONIC TOXICITY
FISH
Product:..... NOEC/NOEL > 100 mg/l. (based on similar products / components)

AQUATIC INVERTEBRATES

Product:..... NOEC/NOEL > 100 mg/l. (based on similar products / components)

TOXICITY TO AQUATIC PLANTS

Product:..... Algae, practically non toxic: LL/EL/IL50 > 100 mg/l. (based on similar products / components)

PERSISTENCE AND DEGRADABILITY

BIODEGRADATION

Product: Biodegradability under aerobic static laboratory conditions is high 528 mg O_2 /g, greater than 98% after 2 days.

BIOLOGICAL OXYGEN DEMAND

Product: 528 mg O_2/g

CHEMICAL OXYGEN DEMAND

Product: 728 mg O_2 /g

BOD / COD RATIO

Product:..... No data available

BIOACCUMULATIVE POTENTIAL

Product:..... Potential to bioaccumate is low.

MOBILITY IN SOIL

Product:..... Expected to partition to water.

RESULTS OF PBT AND mPvB ASSESSMENT

Product:..... Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria. Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.

OTHER ADVERSE EFFECTS

Product: ..... No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13 –DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: ..... Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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14 – TRANSPORTATION INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

UN/NA NUMBER: ..... None
PROPER SHIPPING NAME: Non-Regulated
HAZARD CLASS:..... None
PACKAGING GROUP :..... None
LETTER:..... None
ENVIRONMENTAL HAZARD: Because of modern treatment methods or method of use of this product, only an insignificant amount of the ingredients reaches the environment. That amount is at such levels as to typically not cause any adverse effects.
REPORTABLE QUANTITY:..... None

15 - REGULATIONS

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System. This SDS complies with 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD). **IMPORTANT:** Read this SDS before handling & disposing of this product. Pass this information on to employees, customers, & users of this product.

EPA SRA Title III Chemical Listings:

TSCA STATUS:..... This product is listed on the TSCA inventory. If this product is a blend, all ingredients in the product are listed on the TSCA Inventory List. Any impurities present in this product are exempt from listing.
SECTION 302:..... None
SECTION 304:..... None
SECTION 312:..... None
SARA SECTION 313:..... None
ACUTE:..... Yes (Eyes)
CHRONIC: ..... No
FIRE: ..... No
PRESSURE:..... No
REACTIVE:..... No
CLEAN WATER ACT: ..... None

IMDG – International Marine Dangerous Goods Code
Class Non Regulated - Possible Shipping Description(s): Non Regulated
IATA
Class Non Regulated - Possible Shipping Description(s): Non Regulated

DEA Chemical Trafficking Act:.. No

16 – OTHER INFORMATION

HMIS*

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	C

HMIS®HAZARD INDEX: 0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious Hazard, 4=Severe Hazard.
HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS and product label must be considered.

ND = No Data, NA = Not Applicable/Not Available, ≤ = Less than or equal to, ≥ = Greater than or equal to

REVISION STATEMENT: Changes have been made throughout this Safety Data Sheet (SDS). Please read the entire document. Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) by the Company Health and Risk Assessment Unit.

DISCLAIMER:
Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, the Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving this Safety Data Sheet (SDS) will make their own determination as to its suitability for their intended purposes prior to use. Since the product is within the exclusive control of the user, it is the user's obligation to determine the conditions of safe use of this product. Such conditions should comply with all Federal and State Regulations concerning the Product. It must be recognized that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. **NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.**

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