

## 1. Identification

<b>Product identifier</b>	<b>Citric Acid, Anhydrous USP</b>
<b>Other means of identification</b>	None
<b>Recommended use</b>	Additive for livestock drinking water systems and medicated drinking water
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	Bio Agri Mix LP
<b>Address</b>	P.O. Box 399 Mitchell, ON N0K 1N0 Canada
<b>Telephone</b>	(519) 348-9865
<b>e-mail</b>	Not available.
<b>Emergency phone number</b>	CANUTEC: 1-613-996-6666
<b>Supplier</b>	See above.

## 2. Hazard identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
<b>Environmental hazards</b>	Not classified.	

### Label elements



**Signal word** Warning

**Hazard statement**  
Causes skin irritation.  
Causes serious eye irritation.  
May be corrosive to metals.

### Precautionary statement

**Prevention** Wash thoroughly after handling. Wear protective gloves. Wear eye protection/face protection. Keep only in original packaging.

**Response** IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see information on this label).  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Absorb spillage to prevent material-damage.

**Storage** Store in a corrosion resistant container with a resistant inner liner.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Other hazards** None known.

**Supplemental information** Not applicable.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Citric Acid		77-92-9	100

## 4. First-aid measures

**Inhalation** If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

<b>Skin contact</b>	IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see information on this label).
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. DO NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Avoid contact with eyes and skin. Wear rubber gloves and safety glasses with side shields.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In the event of fire, cool tanks with water spray.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Absorb spillage to prevent material damage. Dike far ahead of spill for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes, skin and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep only in the original container. Store in corrosive resistant container with a resistant inner liner. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS). Protect from excessive heat and moisture.

## 8. Exposure controls/Personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	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. Eye wash facilities and emergency shower must be available when handling this product.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Impervious gloves. Confirm with reputable supplier first.

<b>Other</b>	Wear suitable protective clothing. Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	Avoid inhalation of dust. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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## 9. Physical and chemical properties

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<b>Appearance</b>	Crystalline.
<b>Physical state</b>	Solid.
<b>Form</b>	Crystals
<b>Colour</b>	White
<b>Odour</b>	Odourless
<b>Odour threshold</b>	Not available.
<b>pH</b>	2.2 (1%)
<b>Melting point/freezing point</b>	153 °C (307.4 °F)
<b>Initial boiling point and boiling range</b>	175 °C (347 °F) (Decomposes)
<b>Flash point</b>	Not available.
<b>Evaporation Rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit – upper (%)</b>	Not available.
<b>Vapour pressure</b>	0 kPa @ 20°C
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1.665 g/cm3
<b>Solubility(ies)</b>	
<b>Solubility (Water)</b>	Complete
<b>Partition coefficient (n-octanol/water)</b>	-1.7 @ 20°C
<b>Auto-ignition temperature</b>	1010 °C (1850 °F)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	1.66 g/cm3 estimated at 20 °C
<b>Molecular formula</b>	C6-H8-O7
<b>Molecular weight</b>	192.12 g/mol
<b>Percent volatile</b>	0 %
<b>Specific gravity</b>	1.67 @ 20 °C

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## 10. Stability and reactivity

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<b>Reactivity</b>	Reacts vigorously with alkaline material. Reacts with metals.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Caustics. Oxidizers. Reducing agents. Metals.

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**11. Toxicological information**

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**Information on likely routes of exposure**

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Information on toxicological effects****Acute toxicity**

<b>Components</b>	<b>Species</b>	<b>Test results</b>
Citric Acid (CAS 77-92-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	5790 mg/kg, ECHA
		5400 mg/kg
		5040 mg/kg
	Rat	11700 mg/kg, ECHA

**Skin corrosion/irritation** Causes skin irritation.

<b>Exposure minutes</b>	Not available.
<b>Erythema value</b>	Not available.
<b>Oedema value</b>	Not available.

**Serious eye damage/eye irritation** Causes serious eye irritation.

<b>Corneal opacity value</b>	Not available.
<b>Iris lesion value</b>	Not available.
<b>Conjunctival reddening value</b>	Not available.
<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.

**Respiratory or skin sensitisation**

<b>Respiratory sensitisation</b>	Not classified.
<b>Skin sensitisation</b>	This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.**Carcinogenicity** Not available.**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.**Specific target organ toxicity - single exposure** Not classified.**Specific target organ toxicity - repeated exposure** Not classified.**Aspiration hazard** Not classified.**Chronic effects** Not classified.**Further information** Not available.

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**12. Ecological information**

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<b>Ecotoxicity</b>	See below
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**Ecotoxicological data****Components****Species****Test results**

Citric Acid (CAS 77-92-9)

*Acute*

Crustacea

EC50

Daphnia magna

120 mg/L, 72 hr

**Aquatic***Acute*

Fish

LC50

Bluegill (*Lepomis macrochirus*)

1516 mg/L, 96 hr

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**Mobility in general**

Not available.

**Other adverse effects**

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

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**13. Disposal considerations**

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**Disposal instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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**14. Transport information**

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**General**

Canada: TDG Proof of Classification: In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue. If applicable, the technical name and the classification of the product will appear below.

**Transportation of Dangerous Goods (TDG - Canada)**

Not regulated as dangerous goods.

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**15. Regulatory information**

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**Canadian federal regulations**This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (SOR/2015-17) and the SDS contains all the information required by the HPR.  
VETERINARY USE ONLY**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**WHMIS status**

Controlled

**International regulations****Inventory Status****Country(s) or region****Inventory Name****On Inventory (Yes/No)\***

Canada

Domestic Substances List (DSL)

Yes

Canada

Non-Domestic Substances List (NDSL)

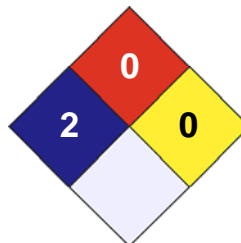
No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**Issue date**

30-November-2016

**Revision date**

30-November-2016

**Version #**

01

**Other information**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Prepared by**

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