BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier	CITRIC ACID ANHY USP/FCC PWD
Manufacturer/Importer/Supplie	er/Distributor information
Manufacturer	
Company name	BRENNTAG CANADA INC
Address	43 Jutland Rd.
	Toronto, ON M8Z 2G6
	Canada
Telephone	416-259-8231
Website	http://www.brenntag.com/canada/en/
E-mail	RegulatoryAffairs@Brenntag.ca
Emergency phone number	1-855-273-6824

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Not classified.	

Label elements

Signal wand	
Signal word	Danger
Hazard statements	Causes skin irritation. Causes serious eye damage.
Precautionary statement	
Prevention	Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves.
Response	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Other hazards	None known.
Supplemental information	100 % of the mixture consists of component(s) of unknown acute dermal toxicity. 100 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Substances

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

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage,	Store in original tightly closed container. Store away from incompatible materials (see Section 10

including any incompatibilities of the SDS). Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Recommendations listed in this section indicate the type of equipment, which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Occupational exposure limits No exposure limits noted for ingredient(s).

Consult provincial or territorial exposure values, as may apply.

Biological limit values No biological exposure limits noted for the ingredient(s).

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Appropriate engineering 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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.
Individual protection measures,	such as personal protective equipment
where the product will be used appropriate PPE and enginee	ations only for the use of PPE. These recommendations cannot anticipate the variety of workplaces d, nor how the product will be used in a variety of applications and processes. In determining ring controls, it is the duty of the employer / user to evaluate their use of this product in accordance ocal jurisdiction, and, if necessary, in conjunction with a professional industrial hygienist.
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	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.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Colour	COLOURLESS
Odour	ODOURLESS
Odour threshold	Not available.
рН	Not available.
Melting point/freezing point	152.78 °C (307 °F)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or expl	osive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	1010 °C (1850 °F)
Decomposition temperature	Not available.

Viscosity	Not available.
Other information	
Density	1.00 lbs/gal
Dynamic viscosity	6.5 mPa.s (25 °C (77 °F))
Explosive properties	Not explosive.
Molecular formula	C6-H8-O7
Molecular weight	192.12 g/mol
Oxidising properties	Not oxidising.
Specific gravity	0.12
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Information on toxicological eff	fects
A cuto toxicity	Not known

Acute toxicity	Not known.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitisation

Respiratory sensitisation	Not a respiratory sensitizer.		
Skin sensitisation	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 an aspiration hazard.		
12. Ecological information			
E	The product is not also iffed as an incompared like because a linear of the data wat analysis to		

EcotoxicityThe product is not classified as environmentally hazardous. However, this does not exclude the
possibility that large or frequent spills can have a harmful or damaging effect on the environment.Persistence and degradabilityNo data is available on the degradability of this substance.

Bioaccumulative potential	No data available.
Mobility in soil	No data 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.

13. Disposal considerations

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

14. Transport information

Transportation information on packaging may be different from that listed.

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78 and

the IBC Code

TDG

Not regulated as dangerous goods.

15. Regulatory information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada DSL Inventory: F	Registration Status		
1,2,3-Propanetricarboxylic acid, 2-hydroxy- (CAS 77-92-9)		Listed	
Controlled Drugs and Su	ibstances Act		
Not regulated.			
Export Control List (CEP	PA 1999, Schedule 3)		
Not listed.			
Greenhouse Gases			
Not listed.			
Precursor Control Regul	ations		
Not regulated.			
US federal regulations	This product is a "Hazardou Standard, 29 CFR 1910.120	is Chemical" as defined by the OSHA Hazard Communication 00.	
TSCA Section 12(b) Expe	ort Notification (40 CFR 707, Su	lbpt. D)	
Not regulated.			
CERCLA Hazardous Sub	ostance List (40 CFR 302.4)		
Not listed.			
SARA 304 Emergency re	lease notification		
Not regulated.			

	ted Substances (29 CFR 1910.1001-1052)	
Not listed.		
-	Reauthorization Act of 1986 (SARA)	
SARA 302 Extremely haza	rdous substance	
Not listed.		
SARA 311/312 Hazardous chemical	Yes	
Classified hazard categories	Skin corrosion or irritation Serious eye damage or eye irritation	
SARA 313 (TRI reporting) Not regulated.		
ther federal regulations		
Drug Enforcement Ad Chemical Code Numb	ministration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) er	and 1310.04(f)(2) and
-	ministration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1	1310.12(c))
•	I Mixtures Code Number	
Not regulated.		
IS state regulations		
US. California Proposition	65	
Not listed.		
nternational regulations		
Stockholm Convention		
Not applicable. Rotterdam Convention		
Not applicable. Kyoto protocol		
Not applicable. Montreal Protocol		
Not applicable. Basel Convention		
Not applicable.		
nternational Inventories		
Country(s) or region	Inventory name	On inventory (yes/no
Australia	Australian Inventory of Chemical Substances (AICS)	Ye
Canada	Domestic Substances List (DSL)	Ye
Canada	Non-Domestic Substances List (NDSL)	Ν
China	Inventory of Existing Chemical Substances in China (IECSC)	Ye
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Ye
Europe	European List of Notified Chemical Substances (ELINCS)	N
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Ye
Korea	Existing Chemicals List (ECL)	Ye
New Zealand	New Zealand Inventory	Ye
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Ye
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Ye
United States & Puerto Ricc	Toxic Substances Control Act (TSCA) Inventory	Ye

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

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Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.