

## SAFETY DATA SHEETS

**This SDS packet was issued with item:**

078127988

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

078021828 078021869 078021885 078021893 078094771 078113989 078169026 078306003 078306011 078306201  
078306300 078312994 078336075 078358859 078399624 078399632 078420039 078685526 078685534 078685542  
078685559 078685567 078685575 078704238

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

078085145 078087087 078088855 078309789

**1. Product and Company Identification**

**Product identifier** Kleenwise®  
**Other means of identification** Not available  
**Recommended use** Water Processing Equipment Cleaner  
**Recommended restrictions** None known.  
**Responsible Party** Waterwise® Inc  
 3608 Parkway Blvd.  
 Leesburg, FL 34748-9399 US  
 Phone 352-787-5008  
 Emergency Phone: 1-800-424-9300 (CHEMTREC)

**2. Hazards Identification**

**Physical hazards** Corrosive to metals Category 1  
**Health hazards** Skin corrosion/irritation Category 1  
 Serious eye damage/eye irritation Category 1  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger  
**Hazard statement** May be corrosive to metals.  
 Causes severe skin burns and eye damage.  
**Precautionary statement**  
**Prevention** Keep only in original container.  
 Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.  
**Response** Absorb spillage to prevent material damage.  
 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 center/doctor.  
 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 Specific treatment (see this label).  
**Storage** Store in corrosive resistant container with a resistant inner liner.  
 Store locked up.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Hazard(s) not otherwise classified (HNOC)** None known.  
**Supplemental information** Not applicable.

**3. Composition/Information on Ingredients**

**Mixture**

Chemical name	Common name and synonyms	CAS number	%
Sulfamic acid		5329-14-6	60 - 100
Citric Acid		77-92-9	10 - 30

**Composition comments** US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

**4. First Aid Measures**

**Inhalation** If inhaled: Remove person to fresh air and keep comfortable for breathing.

<b>Skin contact</b>	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
<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. Immediately call a poison center/doctor.
<b>Ingestion</b>	If swallowed: Rinse mouth. Do NOT induce vomiting.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<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. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Wear rubber gloves and chemical splash goggles.

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## 5. Fire Fighting Measures

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<b>Suitable extinguishing media</b>	Carbon dioxide (CO2). Water spray. Dry chemical powder. Foam.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Firefighters should wear a self-contained breathing apparatus.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	In the event of fire, cool tanks with water spray. Cool containers with flooding quantities of water until well after fire is out.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Ammonia.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

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## 6. Accidental Release Measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep out of low areas. 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.
<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. Use water spray to reduce vapors or divert vapor cloud drift. Large Spills: Wet down with water and dike 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. Prevent entry into waterways, sewers, basements or confined areas.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.

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## 7. Handling and Storage

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<b>Precautions for safe handling</b>	Use only with adequate ventilation. Avoid breathing dust. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Do not get in eyes, on skin or on clothing.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in corrosive resistant container with a resistant inner liner. Store in a closed container away from incompatible materials. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Keep out of the reach of children.

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## 8. Exposure Controls/Personal Protection

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<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>Exposure guidelines</b>	This material does not have established exposure limits.
<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.

## Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles) and a face shield.
<b>Skin protection</b>	
<b>Hand protection</b>	Rubber gloves. Confirm with a reputable supplier first.
<b>Other</b>	As required by employer code. Rubber apron recommended.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
<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. Wash hands before breaks and immediately after handling the product.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Yellow
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not available.
<b>pH</b>	0.89 (10% w/w), Acid reserve 33.56g NaOH/100g
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<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>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

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## 10. Stability and Reactivity

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<b>Reactivity</b>	This product may react with reducing agents. May react with strong bases or oxidizing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Caustics. Oxidizers. Bases. Reducing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Ammonia. Oxides of carbon. Oxides of nitrogen. Oxides of sulfur.

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## 11. Toxicological Information

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<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
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**Information on likely routes of exposure**

<b>Ingestion</b>	Causes digestive tract burns.
<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

**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>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	5040 mg/kg
	Rat	3000 mg/kg
Sulfamic acid (CAS 5329-14-6)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	1050 mg/kg
	Mouse	1312 mg/kg
	Rat	3160 mg/kg
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<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.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not available.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not available.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Non-hazardous by WHMIS/OSHA criteria.	
<b>Further information</b>	Not available.	
<b>Name of Toxicologically Synergistic Products</b>	Not available.	

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## 12. Ecological Information

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<b>Ecotoxicity</b>	See below		
<b>Components</b>		<b>Species</b>	<b>Test Results</b>
Citric Acid (CAS 77-92-9)			
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	120 mg/l, 72 hr
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	1516 mg/l, 96 hr
Sulfamic acid (CAS 5329-14-6)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	14.2 mg/l, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Mobility in soil</b>	No data available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	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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<b>Disposal instructions</b>	Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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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### U.S. Department of Transportation (DOT)

#### Basic shipping requirements:

<b>UN number</b>	UN1759
<b>Proper shipping name</b>	Corrosive solids, n.o.s. (Sulfamic acid)
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Special provisions</b>	128, IB8, IP3, T1, TP33
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	213
<b>Packaging bulk</b>	240

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

#### Basic shipping requirements:

<b>UN number</b>	UN1759
<b>Proper shipping name</b>	CORROSIVE SOLID, N.O.S. (Sulfamic acid)
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Special provisions</b>	16

DOT



TDG



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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 Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**Canada WHMIS Ingredient Disclosure: Threshold limits**

Citric Acid (CAS 77-92-9)	1 %
Sulfamic acid (CAS 5329-14-6)	1 %

**WHMIS status** Controlled

**WHMIS classification** Class E - Corrosive Material

**WHMIS labeling**



**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)** Not regulated.

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US - New Jersey RTK - Substances: Listed substance**

Sulfamic acid (CAS 5329-14-6) Listed.

**US - Texas Effects Screening Levels: Listed substance**

Citric Acid (CAS 77-92-9) Listed.

Sulfamic acid (CAS 5329-14-6) Listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**US. Rhode Island RTK**

Not regulated.

**Inventory status**

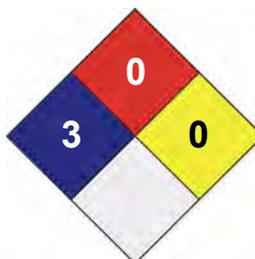
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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

<b>HEALTH</b>	/ 3
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	X

**Disclaimer**

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

**Issue date**

12-February-2015

**Effective date**

01-February-2015

**Expiry date**

01-February-2018

**Further information**

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

**Prepared by**

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

**Other information**

Redbook revision # 1, 1/23/14

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

**1. Product and Company Identification**

<b>Product identifier</b>	<b>Kleenwise Distiller Cleaner &amp; Descaler</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Water Processing Equipment Cleaner
<b>Recommended restrictions</b>	None known.
<b>Manufacturer information</b>	Waterwise Inc Leesburg, FL 34748-4900 US Phone 352-787-5008 Emergency Phone: 1-800-424-9300 (CHEMTREC)
<b>Supplier</b>	Same as above

**2. Hazards Identification**

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>WHMIS 2015 defined hazards</b>	Not classified	
<b>Label elements</b>		



**Signal word** Danger

**Hazard statement** May be corrosive to metals.  
 Causes severe skin burns and eye damage.

**Precautionary statement**

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

**Response** Absorb spillage to prevent material-damage.  
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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.

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

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)** None known

**WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)** None known

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** Not applicable.

**3. Composition/Information on Ingredients**

**Mixture**

<b>Chemical name</b>	<b>Common name and synonyms</b>	<b>CAS number</b>	<b>%</b>
Citric Acid		77-92-9	10-30*
Sulfamic acid		5329-14-6	65-85*

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

**Composition comments**

US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

\*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

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**4. First Aid Measures**

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<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
<b>Skin contact</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Specific treatment (see information on this label). Immediately call a POISON CENTER/doctor.
<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. Immediately call a POISON CENTER/doctor.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. 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. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

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**5. Fire Fighting Measures**

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<b>Suitable extinguishing media</b>	Carbon dioxide. Water spray. Dry chemical powder. Foam.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Firefighters should wear a self-contained breathing apparatus.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self-contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	In the event of fire, cool tanks with water spray. Cool containers with flooding quantities of water until well after fire is out.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Ammonia.

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**6. Accidental Release Measures**

---

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep out of low areas. 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.
<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. Use water spray to reduce vapors or divert vapor cloud drift. Large Spills: Wet down with water and dike 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. Prevent entry into waterways, sewers, basements or confined areas.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.

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**7. Handling and Storage**

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<b>Precautions for safe handling</b>	Use only with adequate ventilation. Avoid breathing dust. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Do not get in eyes, on skin or on clothing.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in corrosive resistant container with a resistant inner liner. Store in a closed container away from incompatible materials. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Keep out of the reach of children.

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**8. Exposure Controls/Personal Protection**

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<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
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<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Exposure guidelines</b>	This material does not have established exposure limits.
<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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles) and a face shield.
<b>Skin protection</b>	
<b>Hand protection</b>	Impervious gloves. Confirm with reputable supplier first.
<b>Other</b>	As required by employer code. Rubber apron recommended.
<b>Respiratory protection</b>	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. Wash hands before breaks and immediately after handling the product.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Free-flowing Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Yellow
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not available.
<b>pH</b>	0.89 (10% w/w), Acid reserve 33.56g NaOH/100g
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<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>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

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## 10. Stability and Reactivity

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<b>Reactivity</b>	This product may react with reducing agents. May react with strong bases or oxidizing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Caustics. Oxidizers. Bases. Reducing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Ammonia. Oxides of carbon. Oxides of nitrogen. Oxides of sulfur.

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## 11. Toxicological Information

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**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.

**Information on likely routes of exposure**

<b>Ingestion</b>	Causes digestive tract burns.
<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

**Information on toxicological effects**

**Acute toxicity**

Components	Species	Test Results
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	5400 mg/kg, ECHA 5040 mg/kg, HSDB
	Rat	11700 mg/kg, ECHA 6730 mg/kg, HSDB
Sulfamic acid (CAS 5329-14-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Guinea pig	1050 mg/kg, SAX
	Mouse	1312 mg/kg, SAX
	Rat	> 2000 mg/kg 3160 mg/kg, SAX 2140 mg/kg, ECHA

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

<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 damage.

<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 sensitization****Respiratory sensitization** Not available.**Skin sensitization** This product is not expected to cause skin sensitization.**Mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.**Carcinogenicity** Not classified or listed by IARC, NTP, OSHA and ACGIH.**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.**Teratogenicity** Non-hazardous by WHMIS/OSHA criteria.**Specific target organ toxicity - single exposure** Not classified.**Specific target organ toxicity - repeated exposure** Not classified.**Aspiration hazard** Not available.**Chronic effects** Prolonged inhalation may be harmful.

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**12. Ecological Information**

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**Ecotoxicity** See below**Ecotoxicological data****Components**

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

Sulfamic acid (CAS 5329-14-6)

**Aquatic**

Fish

LC50

Fathead minnow (*Pimephales promelas*)

14.2 mg/L, 96 hours

**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** Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.**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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**Transport of Dangerous Goods (TDG) Proof of Classification** Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.**U.S. Department of Transportation (DOT)****Basic shipping requirements:****UN number** UN1759

<b>Proper shipping name</b>	Corrosive solids, n.o.s.
<b>Technical name</b>	Sulfamic acid
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Special provisions</b>	128, IB8, IP3, T1, TP33
<b>Packaging exceptions</b>	<11 lbs - Limited Quantity
<b>Packaging non bulk</b>	213
<b>Packaging bulk</b>	240

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

**Basic shipping requirements:**

<b>UN number</b>	UN1759
<b>Proper shipping name</b>	CORROSIVE SOLID, N.O.S.
<b>Technical name</b>	Sulfamic acid
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Special provisions</b>	16
<b>Packaging exceptions</b>	< 5kg - Limited Quantity

**DOT**



**TDG**




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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 HPR and the SDS contains all the information required by the HPR.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**WHMIS 2015 Exemptions** Not applicable

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - No
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No  
**SARA 311/312 Hazardous chemical** No  
**SARA 313 (TRI reporting)**  
 Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**US state regulations** See below

**US - New Jersey RTK - Substances: Listed substance**

Sulfamic acid (CAS 5329-14-6)

**US - Texas Effects Screening Levels: Listed substance**

Citric Acid (CAS 77-92-9) Listed.

Sulfamic acid (CAS 5329-14-6) Listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**Inventory status**

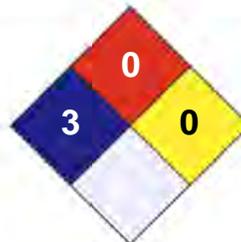
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



**Disclaimer**

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

**Issue date**

04-May-2018

**Version #**

01

**Effective date**

04-May-2018

**Prepared by**

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

**Other information**

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

Redbook revision # 2, 1/6/17



## MATERIAL SAFETY DATA SHEET – GELATIN CAPSULES

### SECTION I

**Manufacturer's Name:** Torpac Inc.

**Address:** 333 Route 46, Fairfield, NJ 07004, USA

**Emergency Tel. #:** 1-973-244-1125 Fax #: 1-973-244-1365

**Chemical Name and Synonyms:** Hard Gelatin Capsules

**Trade Name and Synonyms:** Torpac Capsules

### SECTION II - HAZARDOUS INGREDIENTS

**Hazardous Ingredients:** None

**Hazardous Mixtures of Other Liquids, Solids or Gases:** None

### SECTION III -PHYSICAL DATA

**Boiling Point (°F):** None, Solid **Specific gravity (H<sub>2</sub>O = 1):** 1.01

**Vapor Pressure:** None, Solid **Percent Volatile by Vol:** N/A

**Vapor Density:** None, Solid **Evaporation Rate:** None/ Solid

**Solubility in Water:** Soluble at 37° C **Appearance and Odor:** Clear and Odorless

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** None **Extinguishing Media:** CO<sub>2</sub>, Water

**Special Firefighting Procedures:** None **Unusual Fire and Explosion Hazards:** None

### SECTION V - HEALTH HAZARD DATA

**Health Hazards:** None

### SECTION VI - REACTIVITY DATA

**Stability:** Stable **Hazardous Polymerization:** Will not Occur

## **SECTION VII - SPILL OR LEAK PROCEDURES**

**Spill or Leak Procedure:** N/A - material a solid **Waste Disposal Method:** Normal

## **SECTION VIII - SPECIAL PROTECTION INFORMATION**

**No special protection required.**

## **SECTION IX - SPECIAL PRECAUTIONS**

**No special precautions other than stated on shipping label.**



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