

## QUESTAR ACID

### Section 1. Chemical product and company identification

**Product name** : QUESTAR ACID  
**Recommended use and restrictions** : Cleaning product  
 Use only for the purpose on the product label.

**Product dilution information** : Up to 16 oz/gal or 125 mL/L in water

**Supplier's information** : Ecolab Inc. Food & Beverage Division  
 370 N. Wabasha Street  
 St. Paul, MN 55102  
 1-800-392-3392

**Code** : 912747-02

**Date of issue** : 10 Jul 2013

EMERGENCY HEALTH INFORMATION: 1-800-328-0026  
 Outside United States and Canada CALL 1-651-222-5352 (in USA)

### Section 2. Hazards identification

**GHS Classification** : **Product AS SOLD**  
 ACUTE TOXICITY: INHALATION - Category 4  
 SKIN CORROSION/IRRITATION - Category 1  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3

**GHS label elements**

**Signal word** : Danger

**Symbol** :

**Hazard statements** : Harmful if inhaled.  
 Causes severe skin burns and eye damage.  
 May cause respiratory irritation.

**Precautionary statements**

**Prevention** : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not mix with bleach or other chlorinated products - will cause chlorine gas. Wash hands thoroughly after handling.

**Response** :

**Product AT USE DILUTION**  
 SKIN CORROSION/IRRITATION - Category 1  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

Danger



Causes severe skin burns and eye damage.

Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not mix with bleach or other chlorinated products - will cause chlorine gas. Wash hands thoroughly after handling.

## Section 2. Hazards identification

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. 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. Immediately call a POISON CENTER or physician. 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 or physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. 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. Immediately call a POISON CENTER or physician. 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 or physician.

- Storage** : No other specific measures identified.  
**Disposal** : See section 13 for waste disposal information.  
**Other hazards** : None known.

- No other specific measures identified.  
 See section 13 for waste disposal information.  
 None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Product AS SOLD**

Hazardous ingredients	Concentration Range (%)	CAS number
PHOSPHORIC ACID	27	7664-38-2
CITRIC ACID	1 - 5	77-92-9
alcohols, c9-11, ethoxylated	1 - 5	68439-46-3

**Product AT USE DILUTION**

Hazardous ingredients	Concentration Range (%)	CAS number
PHOSPHORIC ACID	3	7664-38-2

## Section 4. First aid measures

- Product AS SOLD**
- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- Skin contact** : Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
- Ingestion** : Get medical attention immediately. Rinse mouth. Do not induce vomiting.

- Product AT USE DILUTION**
- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
- Get medical attention immediately. Rinse mouth. Do not induce vomiting.

**Protection of first-aiders** :

## Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If ventilation is inadequate, use respirator that will protect against dust/mist. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (section 11)

## Section 5. Fire-fighting measures

**Product AS SOLD**

**Suitable fire extinguishing media** : Use water spray, fog or foam.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
phosphorus oxides

**Specific fire-fighting methods** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

**Product AS SOLD**

**Personal precautions** : Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Do not touch or walk through spilled material.

**Environmental precautions** : Avoid contact of spilled material and runoff with soil and surface waterways.

**Methods for cleaning up** : Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.

**Product AT USE DILUTION**

Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Do not touch or walk through spilled material.

Avoid contact of spilled material and runoff with soil and surface waterways.

Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.

## Section 7. Handling and storage

**Product AS SOLD**

**Handling** : Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products - will cause chlorine gas. Wash thoroughly after handling.

**Storage** : Keep out of reach of children. Keep container tightly closed.

**Product AT USE DILUTION**

Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products - will cause chlorine gas. Wash thoroughly after handling.

Keep out of reach of children. Keep container tightly closed.

## Section 7. Handling and storage

Store between the following temperatures: -10 and 50°C

## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
PHOSPHORIC ACID	<b>ACGIH TLV (United States, 3/2012).</b> STEL: 3 mg/m <sup>3</sup> 15 minutes. TWA: 1 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL (United States, 6/2010).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 6/2009).</b> TWA: 1 mg/m <sup>3</sup> 10 hours. STEL: 3 mg/m <sup>3</sup> 15 minutes.

	<b>Product AS SOLD</b>	<b>Product AT USE DILUTION</b>
<b>Appropriate engineering controls</b>	: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.
<b>Personal protection</b>		
<b>Eye protection</b>	: Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.	Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.
<b>Hand protection</b>	: Use chemical-resistant, impervious gloves.	Use chemical-resistant, impervious gloves.
<b>Skin protection</b>	: Use synthetic apron, other protective equipment as necessary to prevent skin contact.	Use synthetic apron, other protective equipment as necessary to prevent skin contact.
<b>Respiratory protection</b>	: Wear appropriate respirator when ventilation is inadequate and occupational exposure limits are exceeded.	A respirator is not needed under normal and intended conditions of product use.
<b>Hygiene measures</b>	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.	

## Section 9. Physical and chemical properties

	<b>Product AS SOLD</b>	<b>Product AT USE DILUTION</b>
<b>Physical state</b>	: Liquid.	Liquid.
<b>Color</b>	: pink [Dark]	pink [Light]
<b>Odor</b>	: Faint odor	Odorless
<b>pH</b>	: 0.5 to 1.5 (100%)	1.2 to 2.5
<b>Flash point</b>	: > 100°C	> 100°C
<b>Explosion limits</b>	: Not available.	
<b>Flammability (solid, gas)</b>	: Not available.	
<b>Melting point</b>	: Not available.	

## Section 9. Physical and chemical properties

- Boiling point** : Not available.
- Evaporation rate (butyl acetate = 1)** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.13 to 1.23 (Water = 1)
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Odor threshold** : Not available.
- Viscosity** : Not available.

## Section 10. Stability and reactivity

**Product AS SOLD**

- Stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : Highly reactive or incompatible with the following materials: alkalis.  
Slightly reactive or incompatible with the following materials: metals.  
Do not mix with bleach or other chlorinated products - will cause chlorine gas.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

**Route of exposure** : Skin contact, Eye contact, Inhalation, Ingestion

**Product AS SOLD**

Symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Inhalation** : Adverse symptoms may include the following:  
coughing  
Respiratory tract irritation
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

Acute toxicity

- Eye contact** : Causes serious eye damage.
- Skin contact** : Causes severe burns.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.

**Product AT USE DILUTION**

- Adverse symptoms may include the following:  
pain  
watering  
redness
- Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Adverse symptoms may include the following:  
coughing  
Respiratory tract irritation
- Adverse symptoms may include the following:  
stomach pains
  
- Causes serious eye damage.
- Causes severe burns.
- May cause respiratory irritation.

## Section 11. Toxicological information

**Ingestion** : May cause burns to mouth, throat and stomach.

May cause burns to mouth, throat and stomach.

**Toxicity data**

**Product/ingredient name**

phosphoric acid	LC50 Inhalation Dusts and mists	Rat	0.962 mg/l
	LD50 Dermal	Rat	>2000 mg/kg
	LD50 Oral	Rat	>2000 mg/kg
citric acid	LD50 Dermal	Rat	>2000 mg/kg
	LD50 Oral	Rat	11700 mg/kg
alcohols, c9-11, ethoxylated	LD50 Dermal	Rat	>5000 mg/kg
	LD50 Oral	Rat	1400 mg/kg

**Chronic toxicity**

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## Section 12. Ecological information

**Product AS SOLD**

**Ecotoxicity** : This material is harmful to aquatic life.

**Aquatic and terrestrial toxicity**

Product/ingredient name	Result	Species	Exposure
phosphoric acid	Acute LC50 75.1 mg/l	Fish	96 hours
citric acid	Acute LC50 >100 mg/l	Fish	96 hours
alcohols, c9-11, ethoxylated	Acute LC50 8.5 mg/l	Fish	96 hours

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Product AS SOLD**

**Disposal methods** : Avoid disposal. Attempt to use product completely in accordance with intended use. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Product AT USE DILUTION**

Avoid disposal. Attempt to use product completely in accordance with intended use. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**RCRA classification** : Unused product is D002 (Corrosive)

## Section 14. Transport information

**Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.**

**DOT**

<b>DOT Classification</b>	UN1805
<b>DOT Proper shipping name</b>	Phosphoric acid solution
<b>Class</b>	8
<b>Packing group</b>	III

**IMO/IMDG**

<b>IMO/IMDG Classification</b>	UN1805
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## Section 14. Transport information

IMO/IMDG Proper shipping name PHOSPHORIC ACID, SOLUTION

Class 8

Packing group III

For transport in bulk, see shipping documents for specific transportation information.

### Product AT USE DILUTION

Not intended for transport.

## Section 15. Regulatory information

Product AS SOLD

### U.S. Federal regulations

TSCA 8(b) inventory : All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No listed substance

SARA 302/304 emergency planning and notification: No listed substance

**SARA 313** **Product name** **CAS number** **Concentration**

Form R - Reporting requirements : No listed substance

California Prop. 65 : No listed substance

## Section 16. Other information

Product AS SOLD

Hazardous Material Information System (U.S.A.) :

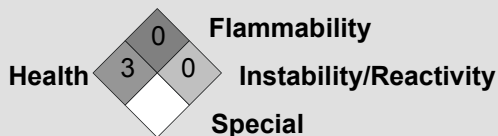
Health	*	3
Flammability		0
Physical hazards		0

National Fire Protection Association (U.S.A.) :



Product AT USE DILUTION

Health	*	3
Flammability		0
Physical hazards		0



Date of issue : 10 Jul 2013  
 Prepared by : Regulatory Affairs  
 1-800-352-5326

### Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.