

## PASSIVATION ACID

### Section 1. Chemical product and company identification

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

**Product dilution information** : Up to 64 oz/gal or 500 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** : 916510-01

**Date of issue** : 18 Nov 2013

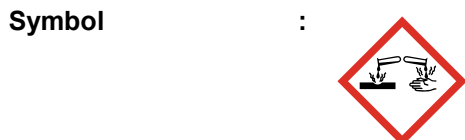
EMERGENCY HEALTH INFORMATION: 1-800-328-0026  
 Outside United States and Canada CALL 1-651-222-5352 (in USA)

### Section 2. Hazards identification

**GHS Classification** : **Product AS SOLD**  
 SKIN CORROSION/IRRITATION - Category 1  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

**GHS label elements**

**Signal word** : Danger



**Hazard statements** : Causes severe skin burns and eye damage.

**Precautionary statements**

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

**Response** : 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

**Product AT USE DILUTION**  
 SKIN CORROSION/IRRITATION - Category 1  
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Danger



Causes severe skin burns and eye damage.

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## Section 2. Hazards identification

	do. Continue rinsing. Immediately call a POISON CENTER or physician.	lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
<b>Storage</b>	: No other specific measures identified.	No other specific measures identified.
<b>Disposal</b>	: See section 13 for waste disposal information.	See section 13 for waste disposal information.
<b>Other hazards</b>	: None known.	None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

### Product AS SOLD

Hazardous ingredients	Concentration Range (%)	CAS number
nitric acid	23	7697-37-2
PHOSPHORIC ACID	23	7664-38-2

### Product AT USE DILUTION

Hazardous ingredients	Concentration Range (%)	CAS number
nitric acid	11	7697-37-2
PHOSPHORIC ACID	11	7664-38-2

## Section 4. First aid measures

	Product AS SOLD	Product AT USE DILUTION
<b>Eye contact</b>	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Skin contact</b>	: 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.	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.
<b>Inhalation</b>	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
<b>Ingestion</b>	: Get medical attention immediately. Rinse mouth. Do not induce vomiting.	Get medical attention immediately. Rinse mouth. Do not induce vomiting.
<b>Protection of first-aiders</b>	: 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.	
<b>Notes to physician</b>	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.	

See toxicological information (section 11)

## Section 5. Fire-fighting measures

### Product AS SOLD

<b>Suitable fire extinguishing media</b>	: Use water spray, fog or foam.
<b>Specific hazards arising from the chemical</b>	: In a fire or if heated, a pressure increase will occur and the container may burst.

## Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 nitrogen oxides  
 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	Product AT USE DILUTION
<b>Personal precautions</b>	: 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.	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.
<b>Environmental precautions</b>	: Avoid contact of spilled material and runoff with soil and surface waterways.	Avoid contact of spilled material and runoff with soil and surface waterways.
<b>Methods for cleaning up</b>	: 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.	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	Product AT USE DILUTION
<b>Handling</b>	: Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling. Do not mix with bleach or other chlorinated products - will cause chlorine gas.	Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling. Do not mix with bleach or other chlorinated products - will cause chlorine gas.
<b>Storage</b>	: Keep out of reach of children. Keep container tightly closed.  Store between the following temperatures: -30 and 50°C	Keep out of reach of children. Keep container tightly closed.

## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
nitric acid	<b>ACGIH TLV (United States, 3/2012).</b> STEL: 10 mg/m <sup>3</sup> 15 minutes. STEL: 4 ppm 15 minutes. TWA: 5.2 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours. <b>OSHA PEL (United States, 6/2010).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.

## Section 8. Exposure controls/personal protection

PHOSPHORIC ACID

**NIOSH REL (United States, 6/2009).**  
 TWA: 2 ppm 10 hours.  
 TWA: 5 mg/m<sup>3</sup> 10 hours.  
 STEL: 4 ppm 15 minutes.  
 STEL: 10 mg/m<sup>3</sup> 15 minutes.  
**ACGIH TLV (United States, 3/2012).**  
 STEL: 3 mg/m<sup>3</sup> 15 minutes.  
 TWA: 1 mg/m<sup>3</sup> 8 hours.  
**OSHA PEL (United States, 6/2010).**  
 TWA: 1 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 6/2009).**  
 TWA: 1 mg/m<sup>3</sup> 10 hours.  
 STEL: 3 mg/m<sup>3</sup> 15 minutes.

**Product AS SOLD**

**Appropriate engineering controls** : 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.

**Personal protection**

**Eye protection** : Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

**Hand protection** : Use chemical-resistant, impervious gloves.

**Skin protection** : Use synthetic apron, other protective equipment as necessary to prevent skin contact.

**Respiratory protection** : A respirator is not needed under normal and intended conditions of product use.

**Hygiene measures** : 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.

**Product AT USE DILUTION**

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 chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

Use chemical-resistant, impervious gloves.

Use synthetic apron, other protective equipment as necessary to prevent skin contact.

A respirator is not needed under normal and intended conditions of product use.

## Section 9. Physical and chemical properties

**Product AS SOLD**

**Physical state** : Liquid.  
**Color** : Clear  
**Odor** : Pungent  
**pH** : 1 (100%)  
**Flash point** : > 100°C  
 Product does not support combustion.  
**Explosion limits** : Not available.  
**Flammability (solid, gas)** : Not available.  
**Melting point** : Not available.  
**Boiling point** : >100°C (>212°F)  
**Evaporation rate (butyl acetate = 1)** : Not available.

**Product AT USE DILUTION**

Liquid.  
 Clear  
 Pungent  
 1.1  
 > 100°C

## Section 9. Physical and chemical properties

<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1.26 to 1.34 (Water = 1)
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Odor threshold</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): 0 cm <sup>2</sup> /s (0 cSt)

## Section 10. Stability and reactivity

### Product AS SOLD

<b>Stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Materials to avoid</b>	: Extremely reactive or incompatible with the following materials: alkalis. Reactive or incompatible with the following materials: metals and moisture. Slightly reactive or incompatible with the following materials: organic materials. Do not mix with bleach or other chlorinated products - will cause chlorine gas.
<b>Hazardous decomposition products</b>	: 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

<b>Eye contact</b>	: Adverse symptoms may include the following: pain watering redness
<b>Skin contact</b>	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Inhalation</b>	: Adverse symptoms may include the following: coughing Respiratory tract irritation
<b>Ingestion</b>	: Adverse symptoms may include the following: stomach pains
<b>Acute toxicity</b>	
<b>Eye contact</b>	: Causes serious eye damage.
<b>Skin contact</b>	: Causes severe burns.
<b>Inhalation</b>	: May cause respiratory irritation.
<b>Ingestion</b>	: May cause burns to mouth, throat and stomach.

### 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.
May cause burns to mouth, throat and stomach.

## Section 11. Toxicological information

### 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

### Chronic toxicity

<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: 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
nitric acid	Acute LC50 72 mg/l	Fish	96 hours
phosphoric acid	Acute LC50 75.1 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>	UN3264
<b>DOT Proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (phosphoric acid, nitric acid)
<b>Class</b>	8
<b>Packing group</b>	II

### IMO/IMDG

<b>IMO/IMDG Classification</b>	UN3264
<b>IMO/IMDG Proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, phosphoric acid)
<b>Class</b>	8
<b>Packing group</b>	II

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

## Section 14. Transport 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: nitric acid

SARA 302/304 emergency planning and notification: nitric acid

<u>SARA 313</u>	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: nitric acid	7697-37-2	22.78

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

A diamond-shaped hazard diagram with four quadrants. The top quadrant is labeled 'Flammability' and contains the number '0'. The bottom quadrant is labeled 'Instability/Reactivity' and contains the number '0'. The left quadrant is labeled 'Health' and contains the number '3'. The right quadrant is labeled 'Special' and contains the number '0'.

Date of issue : 18 Nov 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.