

SAFETY DATA SHEET

CHEM-STAR ACID 100

Section 1. Chemical product and company identification

Product name : CHEM-STAR ACID 100
Recommended use and restrictions : Cleaning product
Use only for the purpose on the product label.

Product dilution information : Up to 1 oz/8 gal or 1 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 : 922311-11

Date of issue : 02 Jan 2014

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

Symbol :



Hazard statements : Causes severe skin burns and eye damage.

Precautionary statements

Prevention : 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.

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

Not classified.

No signal word.

No known significant effects or critical hazards.

Wash thoroughly after handling.

Get medical attention if symptoms appear.

Section 2. Hazards identification

	do. Continue rinsing. Immediately call a POISON CENTER or physician.	
Storage	: No other specific measures identified.	No other specific measures identified.
Disposal	: See section 13 for waste disposal information.	See section 13 for waste disposal information.
Other hazards	: None known.	None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product AS SOLD

Hazardous ingredients	Concentration Range (%)	CAS number
PHOSPHORIC ACID	11	7664-38-2
SULFURIC ACID	5	7664-93-9
nitric acid	4	7697-37-2

Product AT USE DILUTION

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

Section 4. First aid measures

	Product AS SOLD	Product AT USE DILUTION
Eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.	No known effect after eye contact. Rinse with water for a few minutes.
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.	No known effect after skin contact. Rinse with water for a few minutes.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.	No special measures required. Treat symptomatically.
Ingestion	: Get medical attention immediately. Rinse mouth. Do not induce vomiting.	Get medical attention if symptoms occur.
Protection of first-aiders	: 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.	
Notes to physician	: 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

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: nitrogen oxides sulfur oxides phosphorus oxides

Section 5. Fire-fighting measures

- 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
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.	Use personal protective equipment as required.
Environmental precautions	: Avoid contact of spilled material and runoff with soil and surface waterways.	Avoid contact of large amounts 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.	Use a water rinse for final clean-up.

Section 7. Handling and storage

	Product AS SOLD	Product AT USE DILUTION
Handling	: 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.	Wash thoroughly after handling.
Storage	: 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.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
PHOSPHORIC ACID	ACGIH TLV (United States, 3/2012). STEL: 3 mg/m ³ 15 minutes. TWA: 1 mg/m ³ 8 hours. OSHA PEL (United States, 6/2010). TWA: 1 mg/m ³ 8 hours. NIOSH REL (United States, 6/2009). TWA: 1 mg/m ³ 10 hours. STEL: 3 mg/m ³ 15 minutes.
SULFURIC ACID	ACGIH TLV (United States, 3/2012). TWA: 0.2 mg/m ³ 8 hours. Form: Thoracic fraction

Section 8. Exposure controls/personal protection

nitric acid

OSHA PEL (United States, 6/2010).

TWA: 1 mg/m³ 8 hours.

NIOSH REL (United States, 6/2009).

TWA: 1 mg/m³ 10 hours.

ACGIH TLV (United States, 3/2012).

STEL: 10 mg/m³ 15 minutes.

STEL: 4 ppm 15 minutes.

TWA: 5.2 mg/m³ 8 hours.

TWA: 2 ppm 8 hours.

OSHA PEL (United States, 6/2010).

TWA: 5 mg/m³ 8 hours.

TWA: 2 ppm 8 hours.

NIOSH REL (United States, 6/2009).

TWA: 2 ppm 10 hours.

TWA: 5 mg/m³ 10 hours.

STEL: 4 ppm 15 minutes.

STEL: 10 mg/m³ 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

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

No protective equipment is needed under normal use conditions.

No protective equipment is needed under normal use conditions.

No protective equipment is needed under normal use conditions.

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 : Red

Odor : Faint odor

pH : 0.5 to 0.9 (100%)

Flash point : > 100°C
Product does not support combustion.

Explosion limits : Not available.

Flammability (solid, gas) : Not available.

Product AT USE DILUTION

Liquid.

Pale color

Odorless

2 to 3

> 100°C

Section 9. Physical and chemical properties

Melting point	: Not available.
Boiling point	: >100°C (>212°F)
Evaporation rate (butyl acetate = 1)	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.105 to 1.135 (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	: Kinematic (room temperature): 0 cm ² /s (0 cSt)

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	: Extremely reactive or incompatible with the following materials: alkalis. Highly reactive or incompatible with the following materials: moisture. Reactive or incompatible with the following materials: metals. Slightly reactive or incompatible with the following materials: organic materials. 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 :

Product AT USE DILUTION

No specific data.

No specific data.

No specific data.

No specific data.

Section 11. Toxicological information

	Causes serious eye damage.	No known significant effects or critical hazards.
Skin contact	: Causes severe burns.	No known significant effects or critical hazards.
Inhalation	: May cause respiratory irritation.	No known significant effects or critical hazards.
Ingestion	: May cause burns to mouth, throat and stomach.	No known significant effects or critical hazards.

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

Carcinogenicity : No known significant effects or critical hazards.

Ingredient name	IARC	NTP	OSHA
SULFURIC ACID	1	Proven	-

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 : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
phosphoric acid	Acute LC50 75.1 mg/l	Fish	96 hours
sulphuric acid	Acute LC50 22 mg/l	Fish	96 hours
nitric acid	Acute LC50 72 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.
RCRA classification	: Unused product is D002 (Corrosive)

Product AT USE DILUTION

Diluted product can be flushed to sanitary sewer. Discard empty container in trash.

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

DOT Classification	UN3264
DOT Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid, phosphoric acid)
Class	8

Section 14. Transport information

Packing group III

IMO/IMDG

IMO/IMDG Classification UN3264

IMO/IMDG Proper shipping name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, phosphoric acid)

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: nitric acid

SARA 302/304 emergency planning and notification: sulphuric acid; nitric acid

SARA 313	Product name	CAS number	Concentration
Form R - Reporting requirements	: nitric acid	7697-37-2	4.489

California Prop. 65 : No products were found.

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.) :



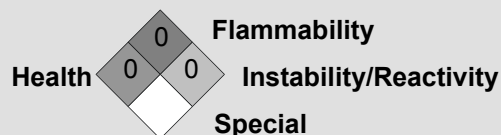
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1-800-352-5326

Notice to reader

Product AT USE DILUTION

Health		0
Flammability		0
Physical hazards		0



Section 16. Other information

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.