

SAFETY DATA SHEET



ENVERROS CITRIC ACID

Section 1. Chemical product and company identification

Product name : ENVERROS CITRIC ACID

Recommended use and restrictions : Floor Cleaner

Use only for the purpose on the product label.

Product dilution information : Up to 12.8 oz/gal or 100 mL/L in water

Supplier's information : Ecolab Inc.
370 N. Wabasha St.
St. Paul, MN 55102
1-800-352-5326

Code : 908074-02

Date of issue : 04 Apr 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

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 breathe dust or mist. 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
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

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.
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	: Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.	None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product AS SOLD

Hazardous ingredients	Concentration Range (%)	CAS number
CITRIC ACID	>50	77-92-9

Product AT USE DILUTION

Hazardous ingredients	Concentration Range (%)	CAS number
CITRIC ACID	5 - 20	77-92-9

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.	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.	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.	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.	Get medical attention immediately. Rinse mouth. Do not induce vomiting.
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. 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 dry chemical powder.
- Specific hazards arising from the chemical** : No specific fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- 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** : If emergency personnel are not present, contain and collect small spillages with non-combustible absorbent material, e.g. sand, earth or other suitable material and place in a suitable container for disposal. 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** : Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not mix with bleach or other chlorinated products - will cause chlorine gas.
- Storage** : Keep out of reach of children. Keep container tightly closed.
- Store between the following temperatures: 0 and 50°C

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. Wash thoroughly after handling.

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

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
None.	

Appropriate engineering controls

Product AS SOLD

: 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.

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.

Personal protection

Eye protection

: 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.

Hand protection

: Use chemical-resistant, impervious gloves.

Use chemical-resistant, impervious gloves.

Skin protection

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

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.

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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.

Section 9. Physical and chemical properties

Product AS SOLD

Physical state	: Powder
Color	: White
Odor	: Odorless
pH	: 1.5 to 2.5 (10%)
Flash point	: > 100°C Product does not support combustion.
Explosion limits	: Not available.
Flammability (solid, gas)	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Evaporation rate (butyl acetate = 1)	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Only known value: 1.54 (Water = 1) (citric acid).
Solubility	: Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.

Product AT USE DILUTION

Liquid.
Colorless
Odorless
1.5 to 2.5
> 100°C

Section 9. Physical and chemical properties

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 : Extremely reactive or incompatible with the following materials: metals.
 Highly reactive or incompatible with the following materials: alkalis.
 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, 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:
 respiratory tract irritation
 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 : May cause respiratory irritation.
 Ingestion : 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.

Toxicity data

Product/ingredient name	Result	Species	Dose
citric acid	LD50 Dermal	Rat	>2000 mg/kg
	LD50 Oral	Rat	11700 mg/kg

Chronic toxicity

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

Section 11. Toxicological information

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
citric acid	Acute LC50 >100 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.

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 Not regulated.

IMO/IMDG

IMO/IMDG Classification Not regulated.

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

<u>SARA 313</u>	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
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.)

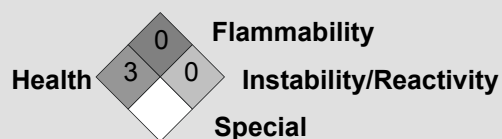
Health	3
Flammability	0
Physical hazards	0

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



Product AT USE DILUTION

Health	3
Flammability	0
Physical hazards	0



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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.