

SAFETY DATA SHEET



TRI-STAR AQUA SOFT

Section 1. Chemical product and company identification

Product name : TRI-STAR AQUA SOFT

Recommended use and restrictions : Laundry softener

Use only for the purpose on the product label.

Product dilution information : Up to 4.0 ozs/50 gal or 0.6 mL/L in water

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

Code : 900224-01

Date of issue : 27 Mar 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**
CORROSIVE TO METALS - Category 1
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Signal word : Danger

Symbol :



Hazard statements : May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

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

Response : Absorb spillage to prevent material damage. 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

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

	water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.	
Storage	: Store in corrosive resistant container with a resistant inner liner.	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
FORMIC ACID	9	64-18-6
poly(oxy-1,2-ethanediyl), alpha-[2-[bis(2-aminoethyl) methylammonio]ethyl]-omega-hydroxy-, n,n'- ditallow acyl derivs., me sulfates (salts)	1 - 5	68410-69-5
ISOPROPYL ALCOHOL	1 - 5	67-63-0

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	: 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
- 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

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

Section 7. Handling and storage

Product AS SOLD

- 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.
- Storage** : Keep out of reach of children. Keep container tightly closed.
- Store between the following temperatures: 5 and 50°C

Product AT USE DILUTION

- Wash thoroughly after handling.
- Keep out of reach of children.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
FORMIC ACID	ACGIH TLV (United States, 3/2012). STEL: 19 mg/m ³ 15 minutes. STEL: 10 ppm 15 minutes. TWA: 9.4 mg/m ³ 8 hours. TWA: 5 ppm 8 hours. OSHA PEL (United States, 6/2010). TWA: 9 mg/m ³ 8 hours. TWA: 5 ppm 8 hours. NIOSH REL (United States, 6/2009). TWA: 5 ppm 10 hours. TWA: 9 mg/m ³ 10 hours.
ISOPROPYL ALCOHOL	ACGIH TLV (United States, 3/2012). STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. OSHA PEL (United States, 6/2010). TWA: 980 mg/m ³ 8 hours. TWA: 400 ppm 8 hours. NIOSH REL (United States, 6/2009). TWA: 400 ppm 10 hours. TWA: 980 mg/m ³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m ³ 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	: Blue [Light]
Odor	: Fragrance-like
pH	: 1.3 to 1.7 (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.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.018 to 1.033 (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	: Dynamic (room temperature): 30 mPa·s (30 cP)

Product AT USE DILUTION

Liquid.
Colorless
Fragrance-like
5 to 7
> 100°C

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. 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

Section 11. Toxicological information

	Product AS SOLD	Product AT USE DILUTION
<u>Symptoms</u>		
Eye contact	: Adverse symptoms may include the following: pain watering redness	No specific data.
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur	No specific data.
Inhalation	: Adverse symptoms may include the following: coughing Respiratory tract irritation	No specific data.
Ingestion	: Adverse symptoms may include the following: stomach pains	No specific data.
<u>Acute toxicity</u>		
Eye contact	: 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	Result	Species	Dose
propan-2-ol	LC50 Inhalation Vapor	Rat	30 mg/l
	LD50 Dermal	Rabbit	12870 mg/kg
	LD50 Oral	Rat	4710 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 : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
formic acid	Acute LC50 >100 mg/l	Fish	96 hours
propan-2-ol	Acute LC50 9640 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 UN3412

DOT Proper shipping name Formic acid solution

Class 8

Packing group III

IMO/IMDG

IMO/IMDG Classification UN3412

IMO/IMDG Proper shipping name FORMIC 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

<u>SARA 313</u>	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: formic acid	64-18-6	9

California Prop. 65 : No listed substance

Section 16. Other information

Product AS SOLD

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

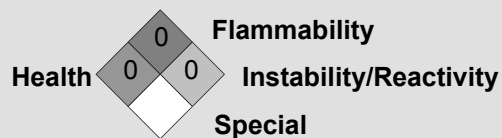
Health	*	3
Flammability		0
Physical hazards		0

Product AT USE DILUTION

Health		0
Flammability		0
Physical hazards		0

Section 16. Other information

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



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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.