

Material Safety Data Sheet



Tri-Star Neutralizer

Section 1. Chemical product and company identification

Trade name : Tri-Star Neutralizer
Product use : Laundry product
Supplier : Ecolab Inc. Institutional Division
370 N. Wabasha Street
St. Paul, MN 55102
1-800-352-5326
Code : 900242
Date of issue : 06-May-2008

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

Section 2. Composition, information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
formic acid	64-18-6	12
citric acid	77-92-9	1 - 5

Section 3. Hazards identification

Physical state : Liquid. [Liquid.]
Emergency overview : DANGER !
CAUSES DIGESTIVE TRACT, EYE AND SKIN BURNS.
CAUSES RESPIRATORY TRACT IRRITATION.
Do not ingest. Do not get in eyes, on skin or on clothing. Avoid breathing vapors, spray or mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Potential acute health effects

Eyes : Corrosive to eyes.
Skin : Corrosive to the skin.
Inhalation : Severely irritating to the respiratory system.
Ingestion : Causes burns to mouth, throat and stomach.

See toxicological information (section 11)

Section 4. First aid measures

Eye contact : In case of contact, immediately flush eyes with cool running water. Remove contact lenses and continue flushing with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : If inhaled, remove to fresh air. If exposed person is not breathing, give artificial respiration or oxygen applied by trained personnel. Get medical attention immediately.

Ingestion : If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire fighting measures

- Flash point** : > 100°C
Product does not support combustion.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.

Dike area of fire to prevent runoff.
In a fire or if heated, a pressure increase will occur and the container may burst.
- 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

- Personal precautions** : Immediately contact emergency personnel. Stop leak if without risk. Use suitable protective equipment. Keep unnecessary personnel away. Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

- Handling** : Do not ingest. 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. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
- Storage** : Keep out of reach of children. Keep container in a cool, well-ventilated area. Keep container tightly closed.
Do not store above the following temperature: 50°C

Section 8. Exposure controls/personal protection

- Engineering measures** : 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 :

- Eyes** : Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.
- Hands** : Use chemical-resistant, impervious gloves.
- Skin** : Use synthetic apron, other protective equipment as necessary to prevent skin contact.
- Respiratory** : Wear appropriate respirator when ventilation is inadequate and occupational exposure limits are exceeded.

Name

formic acid

Exposure limits

ACGIH TLV (United States, 1/2007).

STEL: 19 mg/m³ 15 minute(s).

STEL: 10 ppm 15 minute(s).

TWA: 9.4 mg/m³ 8 hour(s).

TWA: 5 ppm 8 hour(s).

OSHA PEL (United States, 11/2006).

TWA: 9 mg/m³ 8 hour(s).

TWA: 5 ppm 8 hour(s).

Section 9. Physical and chemical properties

Physical state	: Liquid. [Liquid.]
Color	: Blue. [Light]
Odor	: Pungent.
pH	: 0.7 to 1 [Conc. (% w/w): 100%]
Specific gravity	: 1.036 to 1.056
Solubility	: Easily soluble in the following materials: cold water and hot water.

Section 10. Stability and reactivity

Stability	: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Reactivity	: Highly reactive with alkalis. Reactive with 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.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Potential acute health effects

Eyes	: Corrosive to eyes.
Skin	: Corrosive to the skin.
Inhalation	: Severely irritating to the respiratory system.
Ingestion	: Causes burns to mouth, throat and stomach.

Potential chronic health effects

Target organs	: Contains material which may cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract, skin.
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Section 12. Ecological information

Section 13. Disposal considerations

Waste disposal	: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
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Waste classification : Unused product is D002 (Corrosive)

Consult your local or regional authorities.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
DOT Classification	UN3412	Formic acid solution	8	II	Not available.

APPLIES ONLY DURING ROAD TRANSPORT

Any variation of the shipping description based on the packaging is not addressed.

Section 15. Regulatory information

HCS Classification : Corrosive material
Target organ effects

U.S. Federal regulations : **SARA 302/304/311/312 extremely hazardous substances**: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
TSCA 8(b) inventory : All components are listed or exempted.

SARA 313	Product name	Concentration
Form R - Reporting requirements	: formic acid	11.7
California Prop. 65	: No products were found.	

Section 16. Other information

Hazardous Material Information System (U.S.A.)	Health	*	3
	Flammability		0
	Physical hazards		0

Date of issue : 06-May-2008.
Responsible name : Regulatory Affairs
Date of previous issue : 30-May-2007.

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.**