

Material Safety Data Sheet



FORMULA 1

Section 1. Chemical product and company identification

Trade name : FORMULA 1
Product use : Laundry detergent
Supplier : Ecolab Inc. Institutional Division
370 N. Wabasha Street
St. Paul, MN 55102
1-800-352-5326
Code : 905160
Date of issue : 29-April-2005

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>
triphosphoric acid, pentasodium salt	7758-29-4	25
alcohols, c12-16, ethoxylated	68551-12-2	20 - 50
sodium carbonate	497-19-8	5 - 20
2-aminoethanol	141-43-5	5 - 20
boric acid	10043-35-3	1 - 5
subtilisin	9014-01-1	<1

Section 3. Hazards identification

Physical state : Liquid. (slurry)
Emergency overview : Warning!

Causes severe eye and skin irritation. Untreated contact may cause chemical burns.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC RESPIRATORY REACTION.
MAY BE HARMFUL IF SWALLOWED.

Do not ingest. Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Potential acute health effects

Eyes : Severely irritating to the eyes. Untreated contact may cause chemical burns.
Skin : Severely irritating to the skin. Untreated contact may cause severe irritation or chemical burns.
Inhalation : Irritating to respiratory system. May cause sensitization by inhalation.
Ingestion : Harmful if swallowed. May cause 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. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion : Rinse mouth; then drink one or two large glasses of water. 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.
- Fire fighting media and instructions** : Use an extinguishing agent suitable for surrounding fires.
Dike area of fire to prevent product run-off.
No specific hazard.
- Special protective equipment for fire-fighters** : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions** : Ventilate area of leak or spill. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8). Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- 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 sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material 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 get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.
- Storage** : Keep out of the reach of children. Keep container tightly closed. Keep container in a cool, well-ventilated area.
Store between 40 and 0°C

Section 8. Exposure Controls, Personal Protection

- Engineering controls** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. When working with concentrate have eyewash available.
- Personal protection**
- Eyes** : Use Chemical splash goggles.
- Hands** : Use chemical resistant, impervious gloves.
- Skin** : No special protective clothing is required.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Name
2-aminoethanol

Exposure limits

ACGIH TLV (United States, 1/2004).

STEL: 15 mg/m³ 15 minute(s). Form: All forms

STEL: 6 ppm 15 minute(s). Form: All forms

TWA: 7.5 mg/m³ 8 hour(s). Form: All forms

TWA: 3 ppm 8 hour(s). Form: All forms

OSHA PEL (United States, 8/1997).

TWA: 6 mg/m³ 8 hour(s). Form: All forms

TWA: 3 ppm 8 hour(s). Form: All forms

NIOSH REL (United States, 12/2001).

STEL: 15 mg/m³ 15 minute(s). Form: All forms

STEL: 6 ppm 15 minute(s). Form: All forms

TWA: 8 mg/m³ 10 hour(s). Form: All forms

TWA: 3 ppm 10 hour(s). Form: All forms

Section 9. Physical and chemical properties

Physical state	: Liquid. (slurry)
Color	: Tan. (Light.)
Odor	: Fragrance like.
pH	: 10.5 (100%)
Boiling/condensation point	: >100 °C
Specific gravity	: 1.4 (Water = 1)
Dispersion properties	: Partially dispersed in cold water, hot water.
Solubility	: Partially soluble in cold water, hot water.

Section 10. Stability and reactivity

Stability	: The product is stable.
Reactivity	: Reactive with metals, acids. Slightly reactive to reactive with organic materials.

Section 11. Toxicological information

Potential acute health effects

Eyes	: Severely irritating to the eyes. Untreated contact may cause chemical burns.
Skin	: Severely irritating to the skin. Untreated contact may cause severe irritation or chemical burns.
Inhalation	: Irritating to respiratory system. May cause sensitization by inhalation.
Ingestion	: Harmful if swallowed. May cause burns to mouth, throat and stomach.

Potential chronic health effects

Chronic effects on humans	: Contains material which causes damage to the following organs: upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
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Section 12. Ecological information

Products of degradation	: These products are carbon oxides (CO, CO ₂) and water, nitrogen oxides (NO, NO ₂ ...), phosphates. Some metallic oxides.
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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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Consult your local or regional authorities.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
DOT Classification	UN1759	Corrosive solids, n.o.s. (Ethanolamine)	8	III	<p>Limited quantity Yes.</p> <p>Special provisions 128, IB8, IP3</p>

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
 Sensitizing material
 Target organ effects
U.S. Federal regulations : SARA 302/304/311/312 extremely hazardous substances: None.
 SARA 302/304 emergency planning and notification: None.
TSCA 8(b) inventory : All materials are listed or exempt.
California prop. 65 : No products were found.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :	Health *	2
	Fire hazard	0
	Reactivity	0
	Personal protection	B

Date of issue : 29-April-2005.
Responsible name : Regulatory Affairs
Date of previous issue : No Previous Validation.

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.