

Material Safety Data Sheet



FORMULA 1

1. Product and company identification

Trade name of product : FORMULA 1
Product use : Laundry detergent

Product dilution information : 8 Lbs/10 gal or 3.6 kg/37.85 L in water

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

Code : 905160

Date of issue : 06-September-2011

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

2. Hazards identification

Product AS SOLD
Physical state : slurry
Emergency overview : WARNING !

CAUSES SEVERE EYE AND SKIN IRRITATION.
Untreated contact may cause severe irritation or chemical burns.
May cause burns to mouth, throat and stomach.
Do not ingest. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling.

Product AT USE DILUTION
Liquid.
CAUTION !

MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

Avoid contact with eyes, skin and clothing.
Avoid breathing vapors, spray or mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Potential acute health effects

Product AS SOLD
Eyes : Severely irritating to eyes. Untreated contact may cause chemical burns.
Skin : Severely irritating to the skin. Untreated contact may cause severe irritation or chemical burns.
Inhalation : No known significant effects or critical hazards.
Ingestion : May cause burns to mouth, throat and stomach.

Product AT USE DILUTION
Moderately irritating to eyes.

Moderately irritating to the skin.

Moderately irritating to the respiratory system.
No known significant effects or critical hazards.

See toxicological information (Section 11)

3. Composition/information on ingredients

Product AS SOLD

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
PENTASODIUM TRIPHOSPHATE	7758-29-4	24
alcohols, c12-16, ethoxylated	68551-12-2	20 - 50
SODIUM CARBONATE	497-19-8	5 - 20
ETHANOLAMINE	141-43-5	5 - 20
BORIC ACID	10043-35-3	1 - 5
SUBTILISIN	9014-01-1	<1.0

3. Composition/information on ingredients

Product AT USE DILUTION

Name	CAS number	% by weight
PENTASODIUM TRIPHOSPHATE	7758-29-4	2
alcohols, c12-16, ethoxylated	68551-12-2	1 - 5
SODIUM CARBONATE	497-19-8	1 - 5
ETHANOLAMINE	141-43-5	1 - 5

4. First aid measures

	Product AS SOLD	Product AT USE DILUTION
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.	In case of contact, immediately flush eyes with plenty of water. Remove contact lenses and flush again. Get medical attention if irritation persists.
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.	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	: No special measures required. Treat symptomatically.	If inhaled, remove to fresh air.
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.	Get medical attention if symptoms occur.

5. Fire-fighting measures

Product AS SOLD

Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides
Fire-fighting media and instructions	: Use an extinguishing agent suitable for the surrounding fire. Dike area of fire to prevent runoff. No specific fire or explosion hazard.
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.

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.

6. Accidental release measures

<p>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 water rinse for final clean-up.</p>	<p>Use a water rinse for final clean-up.</p>
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7. Handling and storage

<p>Handling : Do not ingest. Do not get in eyes, on skin, or on clothing. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.</p> <p>Storage : Keep out of reach of children. Store in a closed container. Keep container tightly closed. Store between the following temperatures: 0 and 40°C</p>	<p>Product AS SOLD</p> <p>Product AT USE DILUTION Avoid contact with eyes, skin and clothing. Avoid breathing vapors, spray or mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Keep out of reach of children. Store in a closed container.</p>
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8. Exposure controls/personal protection

<p>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.</p> <p>Personal protection</p> <p>Eyes : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.</p> <p>Hands : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.</p> <p>Skin : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.</p> <p>Respiratory : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.</p>	<p>Product AS SOLD</p> <p>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. Eye protection should be used when splashing may occur. For prolonged or repeated handling, use the following type of gloves: Impervious gloves. No protective equipment is needed under normal use conditions. Avoid breathing vapors, spray or mists.</p>
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Ingredient	Exposure limits
ETHANOLAMINE	<p>ACGIH TLV (United States, 2/2010). STEL: 15 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 7.5 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 6 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 3 ppm 10 hour(s). TWA: 8 mg/m³ 10 hour(s). STEL: 6 ppm 15 minute(s). STEL: 15 mg/m³ 15 minute(s).</p>

8. Exposure controls/personal protection

BORIC ACID

ACGIH TLV (United States, 2/2010).STEL: 6 mg/m³ 15 minute(s). Form: Inhalable fractionTWA: 2 mg/m³ 8 hour(s). Form: Inhalable fraction

SUBTILISIN

ACGIH TLV (United States, 2/2010).C: 0.00006 mg/m³, (measured as 100% pure crystalline enzyme)**NIOSH REL (United States, 6/2009).**STEL: 0.00006 mg/m³ 60 minute(s).

9. Physical and chemical properties

Product AS SOLD

Physical state	: slurry
Flash point	: > 100°C Product does not support combustion.
Color	: Tan [Light]
Odor	: Fragrance-like
pH	: 10 to 11 [Conc. (% w/w): 100%]
Boiling/condensation point	: >100°C (>212°F)
Relative density	: 1.2 to 1.6
Solubility	: Partially soluble in the following materials: cold water and hot water.

Product AT USE DILUTION

Liquid.
> 100°C
Colorless
Floral
10.2 to 10.8

10. Stability and reactivity

Product AS SOLD

Stability	: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Reactivity	: Reactive or incompatible with the following materials: metals and acids. Slightly reactive or incompatible with the following materials: organic materials.
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.

11. Toxicological information

Potential acute health effects

Product AS SOLD

Eyes	: Severely irritating to eyes. Untreated contact may cause chemical burns.
Skin	: Severely irritating to the skin. Untreated contact may cause severe irritation or chemical burns.
Inhalation	: No known significant effects or critical hazards.
Ingestion	: May cause burns to mouth, throat and stomach.

Product AT USE DILUTION

Moderately irritating to eyes.
Moderately irritating to the skin.
Moderately irritating to the respiratory system.
No known significant effects or critical hazards.

Product AS SOLD

Potential chronic health effects

Reproductive toxicity	: Contains material which may cause reproductive effects based on animal data.
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Other adverse effects

Target organs	: Contains material which may cause damage to the following organs: kidneys, the nervous system, liver, gastrointestinal tract, upper respiratory tract, central nervous system (CNS), testes.
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12. Ecological information

Ecotoxicity : Not reported

13. Disposal considerations

Product AS SOLD

Waste disposal : 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

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

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.

Product AS SOLD

DOT Classification UN2491
 DOT Proper shipping name Ethanolamine solutions
 Class 8
 Packing group III

For transport in bulk or using IMDG regulations, see shipping documents for specific transportation information.

Product AT USE DILUTION

Not intended for transport.

15. Regulatory information

Product AS SOLD

HCS Classification : Corrosive material
 Target organ effects

Product AT USE DILUTION

Irritating material
 Target organ effects

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

SARA 313 Product name CAS number Concentration

Form R - Reporting requirements : No listed substance

California Prop. 65 : No listed substance

16. Other information

Product AS SOLD

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

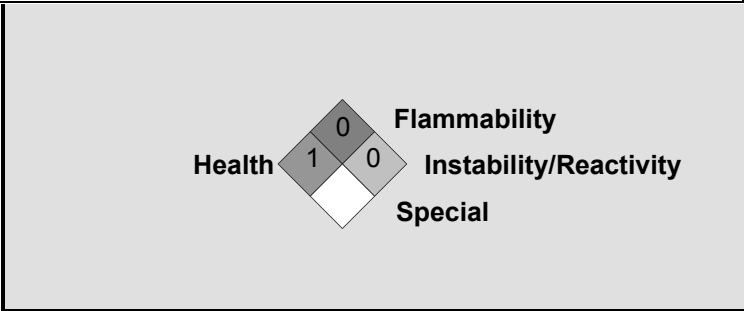
Health	2
Flammability	0
Physical hazards	0

Product AT USE DILUTION

Health	*	1
Flammability		0
Physical hazards		0

16. Other information

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



Date of issue : 06-September-2011

Responsible name : Regulatory Affairs
1-800-352-5326

☑ Indicates information that has changed from previously issued version.

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.**