

# SAFETY DATA SHEET

**ECOLAB®**

ENFORCE LP

## Section 1. Chemical product and company identification

**Product name** : ENFORCE LP  
**Recommended use and restrictions** : Cleaning product  
Use only for the purpose on the product label.

**Product dilution information** : Up to 5 oz/gal or 39 mL/L in water

**Supplier's information** : Ecolab Inc. Food & Beverage Division  
370 N. Wabasha Street  
St. Paul, MN 55102  
1-800-392-3392

**Code** : 937292-02  
**Date of issue** : 19 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

<b>Product AS SOLD</b>		<b>Product AT USE DILUTION</b>
<b>GHS Classification</b>	: SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
<b>GHS label elements</b>		
<b>Signal word</b>	: Danger	Danger
<b>Symbol</b>	: 	
<b>Hazard statements</b>	: Causes severe skin burns and eye damage.	Causes severe skin burns and eye damage.
<b>Precautionary statements</b>		
<b>Prevention</b>	: Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Wash hands thoroughly after handling. Mixing this product with acid or ammonia releases chlorine gas.	Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wash hands thoroughly after handling.
<b>Response</b>	: 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	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

## 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.
<b>Storage</b>	: No other specific measures identified.	No other specific measures identified.
<b>Disposal</b>	: See section 13 for waste disposal information.	See section 13 for waste disposal information.

**Other hazards** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Product AS SOLD**

<b>Hazardous ingredients</b>	<b>Concentration Range (%)</b>	<b>CAS number</b>
SODIUM HYDROXIDE	9	1310-73-2
sodium hypochlorite	3	7681-52-9
COCAMINE OXIDE	1 - 5	61788-90-7
SODIUM XYLENE SULFONATE	1 - 5	1300-72-7

**Product AT USE DILUTION**

<b>Hazardous ingredients</b>	<b>Concentration Range (%)</b>	<b>CAS number</b>
sodium hypochlorite	<0.5	7681-52-9

## Section 4. First aid measures

	<b>Product AS SOLD</b>	<b>Product AT USE DILUTION</b>
<b>Eye contact</b>	: 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.
<b>Skin contact</b>	: 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.
<b>Inhalation</b>	: 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.
<b>Ingestion</b>	: Get medical attention immediately. Rinse mouth. Do not induce vomiting.	Get medical attention immediately. Rinse mouth. Do not induce vomiting.
<b>Protection of first-aiders</b>	: 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.	
<b>Notes to physician</b>	: 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. This material is toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
sulfur oxides  
halogenated compounds  
metal oxide/oxides

**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

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

: 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. Mixing this product with acid or ammonia releases 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
SODIUM HYDROXIDE	<b>ACGIH TLV (United States, 3/2012).</b> C: 2 mg/m <sup>3</sup> <b>OSHA PEL (United States, 6/2010).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 6/2009).</b> CEIL: 2 mg/m <sup>3</sup> <b>AIHA WEEL (United States, 10/2011).</b> STEL: 2 mg/m <sup>3</sup> 15 minutes. <b>ACGIH TLV (United States, 3/2012).</b> STEL: 2.9 mg/m <sup>3</sup> 15 minutes. STEL: 1 ppm 15 minutes. TWA: 1.5 mg/m <sup>3</sup> 8 hours. TWA: 0.5 ppm 8 hours.
sodium hypochlorite	<b>OSHA PEL (United States, 6/2010).</b> CEIL: 3 mg/m <sup>3</sup> CEIL: 1 ppm <b>NIOSH REL (United States, 6/2009).</b> CEIL: 0.5 ppm 15 minutes. CEIL: 1.45 mg/m <sup>3</sup> 15 minutes.
chlorine	

	Product AS SOLD	Product AT USE DILUTION
<b>Appropriate engineering controls</b>	: 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.	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.
<b>Personal protection</b>		
<b>Eye protection</b>	: 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.
<b>Hand protection</b>	: Use chemical-resistant, impervious gloves.	Use chemical-resistant, impervious gloves.
<b>Skin protection</b>	: Use synthetic apron, other protective equipment as necessary to prevent skin contact.	Use synthetic apron, other protective equipment as necessary to prevent skin contact.
<b>Respiratory protection</b>	: A respirator is not needed under normal and intended conditions of product use.	A respirator is not needed under normal and intended conditions of product use.
<b>Hygiene measures</b>	: 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		Product AT USE DILUTION
<b>Physical state</b>	: Liquid.	Liquid.
<b>Color</b>	: Yellow [Light]	Pale color
<b>Odor</b>	: chlorine	Faint odor [Slight]
<b>pH</b>	: 12 to 13 (100%)	11.8 to 12.8
<b>Flash point</b>	: > 100°C Product does not support combustion.	> 100°C
<b>Explosion limits</b>	: Not available.	
<b>Flammability (solid, gas)</b>	: Not available.	
<b>Melting point</b>	: Not available.	
<b>Boiling point</b>	: 100°C (212°F)	
<b>Evaporation rate (butyl acetate = 1)</b>	: Not available.	
<b>Vapor pressure</b>	: Not available.	
<b>Vapor density</b>	: Not available.	
<b>Relative density</b>	: 1.155 to 1.185 (Water = 1)	
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.	
<b>Partition coefficient: n-octanol/water</b>	: Not available.	
<b>Auto-ignition temperature</b>	: Not available.	
<b>Decomposition temperature</b>	: Not available.	
<b>Odor threshold</b>	: Not available.	
<b>Viscosity</b>	: Not available.	

## Section 10. Stability and reactivity

### Product AS SOLD

<b>Stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Materials to avoid</b>	: Reactive or incompatible with the following materials: organic materials and acids. Slightly reactive or incompatible with the following materials: metals. Mixing this product with acid or ammonia releases chlorine gas.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

<b>Route of exposure</b>	: Skin contact, Eye contact, Inhalation, Ingestion
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## Section 11. Toxicological information

Product AS SOLD		Product AT USE DILUTION	
<b>Symptoms</b>			
<b>Eye contact</b>	: Adverse symptoms may include the following: pain watering redness	Adverse symptoms may include the following: pain watering redness	
<b>Skin contact</b>	: Adverse symptoms may include the following: pain or irritation redness blistering may occur	Adverse symptoms may include the following: pain or irritation redness blistering may occur	
<b>Inhalation</b>	: Adverse symptoms may include the following: coughing Respiratory tract irritation	Adverse symptoms may include the following: coughing Respiratory tract irritation	
<b>Ingestion</b>	: Adverse symptoms may include the following: stomach pains	Adverse symptoms may include the following: stomach pains	
<b>Acute toxicity</b>			
<b>Eye contact</b>	: Causes serious eye damage.	Causes serious eye damage.	
<b>Skin contact</b>	: Causes severe burns.	Causes severe burns.	
<b>Inhalation</b>	: May cause respiratory irritation.	May cause respiratory irritation.	
<b>Ingestion</b>	: May cause burns to mouth, throat and stomach.	May cause burns to mouth, throat and stomach.	

### Toxicity data

#### Product/ingredient name

sodium hypochlorite	LD50 Dermal	Rabbit	>10000 mg/kg
	LD50 Oral	Rat	5230 mg/kg
amines, coco alkylidimethyl, n-oxides	LD50 Dermal	Rat	>2174 mg/kg
	LD50 Oral	Rat	846 mg/kg
Benzenesulfonic acid, dimethyl-, sodium salt (1:1)	LC50 Inhalation	Rat	>6.2 mg/l
	Dusts and mists		
	LD50 Dermal	Rabbit	>2000 mg/kg
	LD50 Oral	Rat	>7000 mg/kg

### Chronic toxicity

<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

## Section 12. Ecological information

### Product AS SOLD

**Ecotoxicity** : This material is toxic to aquatic life.

#### Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
sodium hydroxide	Acute EC50 40 mg/l	Daphnia	48 hours
sodium hypochlorite	Acute EC50 0.071 mg/l	Daphnia	48 hours
amines, coco alkylidimethyl, n-oxides	Acute LC50 <1 mg/l	Fish	96 hours
Benzenesulfonic acid, dimethyl-, sodium salt (1:1)	Acute EC50 230 mg/l	Aquatic plants	96 hours

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

<b>Product AS SOLD</b>		<b>Product AT USE DILUTION</b>
<b>Disposal methods</b>	: 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.	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.
<b>RCRA classification</b> : Unused product is D002 (Corrosive)		

## 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

<b>DOT Classification</b>	UN3266
<b>DOT Proper shipping name</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide, sodium hypochlorite)
<b>Class</b>	8
<b>Packing group</b>	II
<b>IMO/IMDG</b>	
<b>IMO/IMDG Classification</b>	UN3266
<b>IMO/IMDG Proper shipping name</b>	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (sodium hydroxide, sodium hypochlorite)
<b>Class</b>	8
<b>Packing group</b>	II

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

<b>TSCA 8(b) inventory</b>	: All components are listed or exempted.
<b>SARA 302/304/311/312 extremely hazardous substances</b>	: No listed substance
<b>SARA 302/304 emergency planning and notification</b>	: No listed substance

<u>SARA 313</u>	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
<b>Form R - Reporting requirements</b>	: No listed substance		
<b>California Prop. 65</b> : No listed substance			

## Section 16. Other information

## 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		3
Flammability		0
Physical hazards		0

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



Date of issue : 19 Mar 2013

Prepared by : Regulatory Affairs  
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.