

Material Safety Data Sheet



KEYSTONE LIQUID HEAVY DUTY DISHMACHINE DETERGENT

1. Product and company identification

Trade name of product : KEYSTONE LIQUID HEAVY DUTY DISHMACHINE DETERGENT
Product use : Machine Warewashing Detergent

Product dilution information : Up to 0.14 oz/gal or 1.1 mL/L in water

Supplier's information : Ecolab Co.
5105 Tomken Road
Mississauga ON L4W 2X5
1-800-352-5326

Code : 986521-06

Date of issue : 31-August-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 : Liquid.
Emergency overview : DANGER !

CAUSES RESPIRATORY TRACT, DIGESTIVE TRACT, EYE AND SKIN BURNS.
Do not ingest. Do not get in eyes, on skin or on clothing. Do not breathe vapour or spray. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry : Skin contact, Eye contact, Inhalation, Ingestion

Potential acute health effects

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

See toxicological information (Section 11)

Product AT USE DILUTION

Liquid.
CAUTION !

No specific hazard.

No specific hazard.

Product AT USE DILUTION

No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

3. Composition/information on ingredients

Product AS SOLD

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
SODIUM HYDROXIDE	1310-73-2	10 - 30

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.

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.	No known effect after eye contact. Rinse with water for a few minutes.
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.	No known effect after skin contact. Rinse with water for a few minutes.
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.	No special measures required. Treat symptomatically.
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

Auto-ignition temperature	: Not available.
Flammable limits	: Not available.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
Special remarks on fire hazards	: Not available.
Special remarks on explosion hazards	: Not available.
Fire-fighting media and instructions	: Use an extinguishing agent suitable for the surrounding fire. Dyke 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.

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 spilt material.	Use personal protective equipment as required.
Environmental precautions	: Avoid contact of spilt material and runoff with soil and surface waterways.	Avoid contact of large amounts of spilt 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/neutralise liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labelled container. Use a water rinse for final clean-up.	Use a water rinse for final clean-up.

6. Accidental release measures

7. Handling and storage

Product AS SOLD

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

Storage : Keep out of reach of children. Keep container tightly closed.
Do not store above the following temperature: 50°C

Product AT USE DILUTION

Wash thoroughly after handling.

Keep out of reach of children.

8. Exposure controls/personal protection

Product AS SOLD

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour 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.

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.

No special protection is required.

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
sodium hydroxide	US ACGIH 2/2010	-	-	-	-	-	-	-	2	-	[3]
	AB 4/2009	-	-	-	-	-	-	-	2	-	
	BC 9/2010	-	-	-	-	-	-	-	2	-	
	ON 7/2010	-	-	-	-	-	-	-	2	-	
	QC 6/2008	-	-	-	-	2	-	-	-	-	

[3]Skin sensitisation

9. Physical and chemical properties

Product AS SOLD

Physical state : Liquid.

Flash point : > 100°C
Product does not support combustion.

Colour : Red [Dark]

Odour : Odourless

pH : 12.5 to 14.5 [Conc. (% w/w): 100%]

Boiling/condensation point : Not available.

Product AT USE DILUTION

Liquid.
> 100°C

Colourless.
Odourless
10.5 to 12.1

9. Physical and chemical properties

Melting/freezing point : Not available.

Relative density : 1.1 to 1.3

Vapour pressure : Not available.

Vapour density : Not available.

Odour threshold : Not available.

Evaporation rate : Not available.

Viscosity : Not available.

Dispersibility properties : Not available.

Solubility : Not available.

LogK_{ow} : Not available.

10. Stability and reactivity

Product AS SOLD

Stability : The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur.

Conditions of instability : Not available.

Reactivity : Slightly reactive or incompatible with the following materials: acids and moisture.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not occur.

11. Toxicological information

Potential acute health effects

Product AS SOLD

Eyes : Corrosive to eyes.

Skin : Corrosive to the skin.

Inhalation : Corrosive to the respiratory system.

Ingestion : Causes burns to mouth, throat and stomach.

Product AT USE DILUTION

No known significant effects or critical hazards.

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No known significant effects or critical hazards.

No known significant effects or critical hazards.

Product AS SOLD

Potential chronic health effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenic effects : No known significant effects or critical hazards.

Reproductive effects : No known significant effects or critical hazards.

Sensitization to Product : No known significant effects or critical hazards.

Synergistic products (toxicologically) : Not available.

Toxicity data

Product/ingredient name	Test	Route	Result	Species
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11. Toxicological information

sodium hydroxide	LD50	Dermal	>2000 mg/kg	Rabbit
	LD50	Dermal	1350 mg/kg	Rabbit
	LD50	Oral	500 mg/kg	Rabbit
	LD50	Oral	300 to 500 mg/kg	Rat
	LDLo	Oral	500 mg/kg	Rabbit

Other adverse effects

Target organs : Contains material which may cause damage to the following organs: upper respiratory tract.

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

TDG Classification	UN1824
TDG Proper shipping name	SODIUM HYDROXIDE SOLUTION
Class	8
Packing group	II

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

WHMIS : Class E: Corrosive material

Product AT USE DILUTION

Not hazardous by WHMIS criteria.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. Other information

16. Other information

Product AS SOLD

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

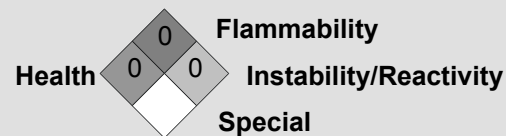
Health	3
Flammability	0
Physical hazards	0

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



Product AT USE DILUTION

Health	0
Flammability	0
Physical hazards	0



Date of issue : 31-August-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.**