SAFETY DATA SHEET



Liquid HD-325 (Chem-Star)

Section 1. Chemical product and company identification

Product name : Liquid HD-325 (Chem-Star)

Recommended use and

restrictions

: Cleaning product

Use only for the purpose on the product label.

Product dilution information: Up to 0.5 oz/gal in water

Supplier's information : Ecolab Inc. Food & Beverage Division

> 370 N. Wabasha Street St. Paul. MN 55102 1-800-392-3392

Code : 922296-09 Date of issue : 18 Apr 2013

EMERGENCY HEALTH INFORMATION: 1-800-328-0026

Outside United States and Canada CALL 1-651-222-5352 (in USA)

Section 2. Hazards identification

Product AS SOLD

GHS Classification : CORROSIVE TO METALS - Category 1

SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION -

Category 1

GHS label elements

Signal word : Danger

Symbol

Hazard statements : May be corrosive to metals.

Causes severe skin burns and eye damage.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face

protection. Wear protective clothing. Mixing this product with acid or ammonia releases chlorine gas. Keep only in original container. Wash

hands thoroughly after handling.

: Absorb spillage to prevent material damage. IF Response

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 **Product AT USE DILUTION**

SKIN CORROSION/IRRITATION - Category

SERIOUS EYE DAMAGE/ EYE IRRITATION

Category 1

Danger



Causes severe skin burns and eye damage.

Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wash hands thoroughly after handling.

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

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Section 2. Hazards identification

water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER

or physician.

Storage : Store in corrosive resistant container with a

resistant inner liner.

Disposal : See section 13 for waste disposal information.

Other hazards : None known.

water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

No other specific measures identified.

See section 13 for waste disposal

information.

None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product AS SOLD

Hazardous ingredientsConcentration Range (%)CAS numberSODIUM HYDROXIDE101310-73-2sodium hypochlorite37681-52-9POLYACRYLIC ACID1 - 59003-01-4

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.

Section 4. First aid measures

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Eye contact : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention

immediately.

Skin contact: 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.

Inhalation : Remove victim to fresh air and keep at rest in a

position comfortable for breathing. Get medical

attention immediately.

Ingestion: Get medical attention immediately. Rinse mouth.

Do not induce vomiting.

Product AT USE DILUTION

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get

medical attention immediately.

Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash

thoroughly before reuse.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get

madical attention immediately

clothing before reuse. Clean shoes

medical attention immediately.

Get medical attention immediately. Rinse

mouth. Do not induce vomiting.

Protection of first-

aiders

: 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.

Notes to physician : 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 Hazardous thermal

decomposition products

: In a fire or if heated, a pressure increase will occur and the container may burst.

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide 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

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 **Methods for** cleaning up

: 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.

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. Mixing this product with acid or ammonia releases chlorine gas. Use only with adequate ventilation. Wash thoroughly after handling.

Storage

: Keep out of reach of children. Keep container tightly closed.

Store between the following temperatures: -30 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	ACGIH TLV (United States, 3/2012).	
	C: 2 mg/m³ OSHA PEL (United States, 6/2010).	
	TWA: 2 mg/m ³ 8 hours.	
	NIOSH REL (United States, 6/2009).	
	CEIL: 2 mg/m³	
sodium hypochlorite	AIHA WEEL (United States, 10/2011).	
	STEL: 2 mg/m³ 15 minutes.	
chlorine	ACGIH TLV (United States, 3/2012).	
	STEL: 2.9 mg/m³ 15 minutes.	
	STEL: 1 ppm 15 minutes.	
	TWA: 1.5 mg/m³ 8 hours.	
	TWA: 0.5 ppm 8 hours.	
	OSHA PEL (United States, 6/2010).	
	CEIL: 3 mg/m³	
	CEIL: 1 ppm NIOSH REL (United States, 6/2009).	
	CEIL: 0.5 ppm 15 minutes.	
	CEIL: 1.45 mg/m³ 15 minutes.	
	OEIE. 1.40 mg/m 10 minutes.	

Product AS SOLD

Appropriate engineering controls

: 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

Eye protection

: Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

Hand protection Skin protection

: Use chemical-resistant, impervious gloves.

: Use synthetic apron, other protective equipment as necessary to prevent skin contact.

Respiratory protection

: A respirator is not needed under normal and intended conditions of product use.

Hygiene measures

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. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

Use chemical-resistant, impervious gloves.
Use synthetic apron, other protective
equipment as necessary to prevent skin

contact.

A respirator is not needed under normal and intended conditions of product use.

: 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.

Product AT USE DILUTION

Liquid.

Pale color

Faint odor

11.8 to 12.8 > 100°C

Section 9. Physical and chemical properties

Product AS SOLD

Physical state : Liquid.

Color : Yellow [Light]
Odor : chlorine

pH : 13.4 to 13.9 (100%)

Flash point : > 100°C

Product does not support combustion.

Explosion limits: Not available. **Flammability (solid,**: Not available.

gas)

Melting point: Not available.Boiling point: >100°C (>212°F)Evaporation rate: Not available.

(butyl acetate = 1)

Vapor pressure : Not available.
Vapor density : Not available.

Relative density : 1.16 to 1.26 (Water = 1)

Solubility : Easily soluble in the following materials: cold

water and hot water.

Partition coefficient: : Not available.

n-octanol/water

Auto-ignition :

temperature

: Not available.

Decomposition

temperature

: Not available.

Odor threshold : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Product AS SOLD

Stability: The product is stable.

Possibility of hazardous

reactions

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

Conditions to avoid : No specific data.

Materials to avoid : Extremely reactive or incompatible with the following materials: acids.

Reactive or incompatible with the following materials: metals.

Slightly reactive or incompatible with the following materials: organic materials.

Mixing this product with acid or ammonia releases chlorine gas.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

Section 11. Toxicological information

Route of exposure : Skin contact, Eye contact, Inhalation, Ingestion

Section 11. Toxicological information

Product AS SOLD

Symptoms

Eve contact: Adverse symptoms may include the following:

watering redness

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Inhalation : Adverse symptoms may include the following:

coughing

Respiratory tract irritation

Ingestion: Adverse symptoms may include the following:

stomach pains

Acute toxicity

Eye contact : Causes serious eye damage.

Skin contact: Causes severe burns.

Inhalation: May cause respiratory irritation.

Ingestion: May cause burns to mouth, throat and stomach.

Product AT USE DILUTION

Adverse symptoms may include the following:

pain watering redness

Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Adverse symptoms may include the following:

coughing

Respiratory tract irritation

Adverse symptoms may include the following:

stomach pains

Causes serious eye damage.

Causes severe burns.

May cause respiratory irritation.

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

Chronic toxicity

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

So known significant effects or critical hazards.

Section 12. Ecological information

Product AS SOLD

Ecotoxicity : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient nameResultSpeciesExposuresodium hydroxideAcute EC50 40 mg/lDaphnia48 hourssodium hypochloriteAcute EC50 0.071 mg/lDaphnia48 hours

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

Section 13. Disposal considerations

Product AS SOLD

Disposal methods: 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.

RCRA classification: Unused product is D002 (Corrosive)

Product AT USE DILUTION

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.

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

DOT Classification UN3266

DOT Proper shipping nameCorrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide, sodium

hypochlorite)

Class 8
Packing group III

IMO/IMDG

IMO/IMDG Classification UN3266

IMO/IMDG Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (sodium hydroxide,

sodium hypochlorite)

Class 8
Packing group III

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

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 : No listed substance

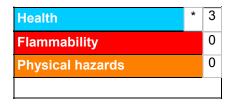
requirements

California Prop. 65 : No listed substance

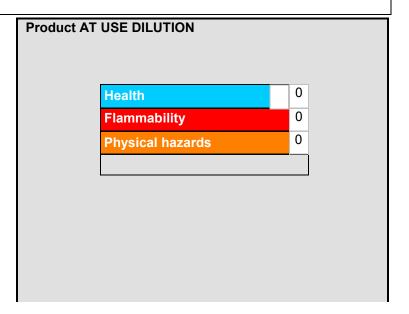
Section 16. Other information

Product AS SOLD

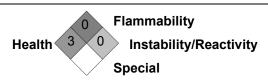
Hazardous Material Information System (U.S.A.)

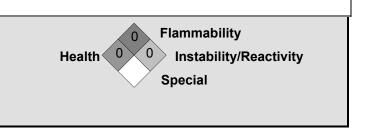


National Fire Protection Association (U.S.A.)



Section 16. Other information





Date of issue : 18 Apr 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.