SAFETY DATA SHEET

Issue Date 12-Jul-2012 Revision Date 28-May-2015 Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Code 16900

Product Name Liquid Laundry Break

Other means of identification

Recommended use of the chemical and restrictions on use

Use only for the purpose on the product label.

Details of the supplier of the safety data sheet

Manufacturer / Manufactured For

ChemMark of Houston 6531 Petropark Dr. Houston, TX 77041 Phone: (832) 467-1233

Emergency telephone number

24 Hour Emergency Phone Number 1-800-535-5053

2. HAZARDS IDENTIFICATION

Classification

| Skin corrosion/irritation | Category 1 Sub-category A |
|-----------------------------------|---------------------------|
| Serious eye damage/eye irritation | Category 1 |
| Acute aquatic toxicity | Category 3 |
| Chronic aquatic toxicity | Category 3 |

Label elements

Emergency Overview

Danger

Hazard statements

Causes severe skin burns and eye damage Harmful to aquatic life with long lasting effects



Appearance Clear

Physical state Liquid

Odor No Information available

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS).

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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If irritation persists or burns occur, get medical attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Drink plenty of water. See a physician immediately.

Precautionary Statements - Storage

Keep container tightly closed in a cool, dry and well-ventilated place away from strong acids and oxidizing agents. Keep locked up and out of the reach of children.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

Other Information

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% | Trade Secret |
|---------------------|-----------|----------|--------------|
| Sodium Hydroxide | 1310-73-2 | 10-30 | * |
| Potassium Hydroxide | 1310-58-3 | 5-10 | * |

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Wash contaminated clothing before reuse. If irritation persists or burns

occur, get medical attention.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and

continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub

affected area. Immediate medical attention is required.

Inhalation If mists/vapors are formed or irritation occurs, leave area and do not return until

mists/vapors have dissipated. If irritation persists, see a physician. Give oxygen or artificial

respiration as needed.

Ingestion Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth

to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aiderUse personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation or burning to mucous membranes. Inhalation may cause irritation or burning to

mucous membranes. May cause irritation and/or burning to eyes and skin.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat

symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid

contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautionsDo not allow into any sewer, on the ground or into any body of water. Should not be

released into the environment. Prevent further leakage or spillage if safe to do so. Prevent

product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning upDilute material with dilute acetic acid to a pH of less than 10.

7. HANDLING AND STORAGE

Precautions for safe handling

Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation,

wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly

labeled containers. Keep out of the reach of children.

Incompatible materials Strong acids and oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies.

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|----------------------------------|------------------------------|--|------------------------------|
| Potassium Hydroxide 1310-58-3 | Ceiling: 2 mg/m ³ | (vacated) Ceiling: 2 mg/m ³ | Ceiling: 2 mg/m ³ |

| Formaldehyde | Ceiling: 0.3 ppm | TWA: 0.75 ppm | IDLH: 20 ppm |
|--------------|------------------|---------------------------------|-------------------------|
| 50-00-0 | | (vacated) TWA: 3 ppm unless | Ceiling: 0.1 ppm 15 min |
| | | specified in 1910.1048 | TWA: 0.016 ppm |
| | | (vacated) STEL: 10 ppm 30 min | |
| | | unless specified in 1910.1048 | |
| | | (vacated) Ceiling: 5 ppm_unless | |
| | | specified in 1910.1048 | |
| | | STEL: 2 ppm see 29 CFR | |
| | | 1910.1048 | |

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls,

as appropriate, to prevent skin contact.

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved Respiratory protection

respiratory protection should be worn. Positive-pressure supplied air respirators or air purifying respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene When using do not eat, drink or smoke. Avoid contact with skin, eyes or clothing. Wear

suitable gloves and eye/face protection. Take off all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

(butyl acetate = 1)

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid **Appearance** Clear

Odor No Information available **Odor threshold** No Information available

Property Values Remarks • Method 1% solution

12.0 - 13.0 Hq 1.349 **Specific Gravity**

No Information available **Viscosity**

Melting point/freezing point No Information available

Boiling point / boiling range 212 ° F Flash point N/A **Evaporation rate** < 1

Flammability (solid, gas) No Information available

Upper flammability limit: N/A

Lower flammability limit: N/A Vapor pressure N/A Vapor density N/A

Water solubility completely soluble **Partition Coefficient** No Information available

(n-octanol/water)

Autoignition temperature No Information available **Decomposition temperature** No Information available

Other Information

Density Lbs/Gal No Information available

VOC Content (%) 0

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Elevated temperature.

Incompatible materials

Strong acids and oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation Causes burns.

Eye contact Corrosive to the eyes and may cause severe damage including blindness.

Skin Contact The product causes burns of eyes, skin and mucous membranes.

Ingestion Causes burns.

| Chemical Name | cal Name Oral LD50 | | Inhalation LC50 |
|----------------------------------|--------------------|----------------------|-----------------------|
| Potassium Hydroxide 1310-58-3 | = 284 mg/kg (Rat) | - | - |
| Formaldehyde 50-00-0 | = 600 mg/kg (Rat) | = 270 mg/kg (Rabbit) | = 0.578 mg/L (Rat)4 h |

Information on toxicological effects

Symptoms No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Corrosivity Causes burns. Extremely corrosive and destructive to tissue. Risk of serious damage to

eyes.

Sensitization
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
No Information available.
No Information available.
No Information available.
No Information available.

Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw

necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure.

Possible risk of irreversible effects. EYES, Respiratory system, Skin.

Target organ effectsEYES, Respiratory systerAspiration hazardNo Information available.

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Numerical measures of toxicity - Product Information

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

12. ECOLOGICAL INFORMATION

Ecotoxicity

3.42% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|---------------------|----------------------|------------------------------------|----------------------------------|
| Potassium Hydroxide | - | 80: 96 h Gambusia affinis mg/L | - |
| 1310-58-3 | | LC50 static | |
| Sodium Chloride | - | 5560 - 6080: 96 h Lepomis | 1000: 48 h Daphnia magna mg/L |
| 7647-14-5 | | macrochirus mg/L LC50 | EC50 340.7 - 469.2: 48 h Daphnia |
| | | flow-through 12946: 96 h Lepomis | magna mg/L EC50 Static |
| | | macrochirus mg/L LC50 static 6020 | |
| | | - 7070: 96 h Pimephales promelas | |
| | | mg/L LC50 static 7050: 96 h | |
| | | Pimephales promelas mg/L LC50 | |
| | | semi-static 6420 - 6700: 96 h | |
| | | Pimephales promelas mg/L LC50 | |
| | | static 4747 - 7824: 96 h | |
| | | Oncorhynchus mykiss mg/L LC50 | |
| | | flow-through | |
| Formaldehyde | - | 22.6 - 25.7: 96 h Pimephales | 2: 48 h Daphnia magna mg/L LC50 |
| 50-00-0 | | promelas mg/L LC50 flow-through | 11.3 - 18: 48 h Daphnia magna |
| | | 23.2 - 29.7: 96 h Pimephales | mg/L EC50 Static |
| | | promelas mg/L LC50 static 1510: 96 | |
| | | h Lepomis macrochirus µg/L LC50 | |
| | | static 41: 96 h Brachydanio rerio | |
| | | mg/L LC50 static 0.032 - 0.226: 96 | |
| | | h Oncorhynchus mykiss mL/L LC50 | |
| | | flow-through 100 - 136: 96 h | |
| | | Oncorhynchus mykiss mg/L LC50 | |
| | | static | |

Persistence and degradability

No Information available.

Bioaccumulation

No Information available.

| Chemical Name | Partition coefficient |
|----------------------------------|-----------------------|
| Potassium Hydroxide 1310-58-3 | 0.83 |

Other adverse effects No Information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number U122

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------|------|----------------------------|------------------------|------------------------|
| Formaldehyde | U122 | Included in waste streams: | | U122 |
| 50-00-0 | | K009, K010, K038, K040, | | |
| | | K156, K157 | | |

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical Name | California Hazardous Waste Status |
|---------------|-----------------------------------|

| Sodium Hydroxide | Toxic |
|---------------------|-----------|
| 1310-73-2 | Corrosive |
| Potassium Hydroxide | Toxic |
| 1310-58-3 | Corrosive |

14. TRANSPORT INFORMATION

The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under 49 CFR, IATA and IMDG to assure regulatory compliance.

DOT

DOT Proper Shipping name

UN1760, Corrosive liquid, n.o.s. (contains sodium hydroxide and potassium hydroxide), 8, PG II

15. REGULATORY INFORMATION

International Inventories

TSCA Complies **DSL/NDSL** Complies **EINECS/ELINCS** Does not comply Does not comply **ENCS IECSC** Complies Complies **KECL** Complies **PICCS** Complies **AICS**

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory.

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List.

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances.

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Sodium Hydroxide 1310-73-2 | 1000 lb | - | - | Х |
| Potassium Hydroxide 1310-58-3 | 1000 lb | - | - | Х |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|-------------------------------|--------------------------|----------------|---|
| Sodium Hydroxide 1310-73-2 | 1000 lb | = | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Potassium Hydroxide | 1000 lb | - | RQ 1000 lb final RQ |
| 1310-58-3 | | | RQ 454 kg final RQ |

US State Regulations

California Proposition 65

This product contains chemicals known to the state of California to cause cancer, or birth defects or other reproductive harm.

| Chemical Name | California Proposition 65 | |
|------------------------|---------------------------|--|
| Formaldehyde - 50-00-0 | | |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------------|------------|---------------|--------------|
| Sodium Hydroxide 1310-73-2 | X | X | - |
| Potassium Hydroxide 1310-58-3 | X | X | Х |
| Formaldehyde 50-00-0 | Х | X | Х |

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

HMIS Health hazards 3 Flammability 0 Physical hazards 0 Personal protection X

Legend

N/A - Not Applicable N/E - Not Established N/D - Not Determined N/K - Not Known

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet