



## GENERAL BUSINESS LICENSE INTERNAL PROCESS CHECKLIST

### City Clerk's Office

- ☒ Verify completeness of application (including GIS check) & accept payment 10/6/2017
- ☒ Yes ☐ No Business in Good Standing (attach certificate) ☐ N/A
- ☐ Send out of city licenses directly to finance for review and approval

### Community Development

Date Received: [Click here to enter a date.](#)

Zoning Verification (*Brad Cullender*)

- ☐ Yes (attach verification form that confirms classification)
- ☒ Yes, with conditions (specify desired condition including timeframe.) *ZONED PUD, ALLOWED BY RIGHT*
- ☐ No (Provide rationale for denial and/or options for resolution) *RULES AND STANDARDS FOR HOME OCCUPATIONS ATTACHED.*
- ☐ No, need additional information (provide supplemental information needs for decision-making). [Click here to enter text.](#)

Occupancy Verification *11/6/17 PB*

- ☐ Yes (provide CO # for reference) *CO NOT REQUIRED FOR HOME OCCUPATIONS.*
- ☐ Yes, matches historical use with new owner (Print copy of updated CO for owner). *I DO NOT RECOMMEND APPROVAL OF THIS LICENSE AS THIS PROPOSED HOME OCCUPATION VIOLATES LDC, SECTION 21-5240 (3), (C), (E)*
- ☐ No (provide rationale for denial and/or options for resolution) *PB 11/7/17*
- ☐ No, need additional information (provide supplemental information needs for decision-making) [Click here to enter text.](#)

### Finance (*Joy Josifek*)

Date Received:

Remittance/Filing Review

- ☐ Frequency ☐ Estimated Liability

Tax ID Number

- ☐ Enter information into mGov. System Tax Identification Number:
- ☐ Provide appropriate tax return information for clerk distribution.

### City Clerk's Office (*Cheryl Scott*)

- ☐ Approved ☐ Approved w/conditions (note on license) ☐ Denied
- License Number: [Click here to enter text.](#) Decision Rationale:
- ☐ Information Packet Sent Letter Date:
- Issue Date:



## GENERAL BUSINESS LICENSE INTERNAL PROCESS CHECKLIST

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Zoning Verification (Brad Callender)

☐ Yes (attach verification form that confirms classification)

☐ Yes, with conditions (specify desired condition including timeframe.) Click here to enter text.

☐ No (Provide rationale for denial and/or options for resolution) Click here to enter text.

☒ No, need additional information (provide supplemental information needs for decision-making). Click here to enter text.

Occupancy Verification (Patrick Buckley)

★ BLDG/CODES & FIRE; NEED CONFIRMATION IF MATERIAL USED IN SOAPMAKING IS HAZARDOUS AND/OR DANGEROUS TO ALLOW IN A S-F DWELLING. BB

☐ Yes (provide CO # for reference) Click here to enter text.

10/13/17

☐ Yes, matches historical use with new owner (Print copy of updated CO for owner).

☐ No (provide rationale for denial and/or options for resolution)

PROVIDE SDS SHEETS FOR LYE AND CAUSTIC POTASH. INDICATE QUANTITIES BEING STORED AND USED. PROVIDE COMPLETE PROCESS DESCRIPTION INCLUDING ANY EQUIPMENT USED. INCLUDE DETAILS, USE EXTRA PAPER TO COMPLETELY DESCRIBE BUSINESS OPERATIONS. ADD 10/19/17

☒ No, need additional information (provide supplemental information needs for decision-making) Click here to enter text.

### Finance (Joy Josifek)

Date Received:

Remittance/Filing Review

☐ Frequency

☐ Estimated Liability

Tax ID Number

☐ Enter information into mGov. System Tax Identification Number:

☐ Provide appropriate tax return information for clerk distribution.

### City Clerk's Office (Cheryl Scott)

☐ Approved ☐ Approved w/conditions (note on license) ☐ Denied

License Number: Click here to enter text.

Decision Rationale:

☐ Information Packet Sent

Letter Date:

Issue Date:

SDS = Safety Data Sheets

**CITY USE ONLY**Date Received: 10-4-17

Date Issued: \_\_\_\_\_

License No: \_\_\_\_\_

Geo Code: \_\_\_\_\_

Form 101.0.04.17

**GENERAL BUSINESS LICENSE - \$20 FEE****\*\*ALL FIELDS REQUIRE A RESPONSE\*\***

**Ownership:** ☐ Individual ☐ Partnership ☐ Corporation  
☐ Nonprofit (attach tax-exempt letter) ☒ LLC ☐ LLP

**Business Type:** ☐ Retail sales ☐ Home occupation ☐ Wholesale  
☐ Utility ☐ Construction ☐ Leasing  
☐ Financial Institution ☐ Government ☐ Hospitality  
☐ Transportation ☐ Professional Services ☒ Manufacturing

**CONTACT INFORMATION:**Taxpayer Entity Name (Owner, Partnership, Corp): Bath Geek LLC

Trade Name of Business (d/b/a): \_\_\_\_\_

Physical Address of Business: 15471 Village Circle, Brighton CO 80603Mailing Address, including Unit #: 15471 Village Circle, Brighton CO 80603 QJDBusiness Phone: 720-335-5218Business Email Address: ccity@bathgeek.comWebsite: www.bathgeek.com

Fully describe business operations: \_\_\_\_\_

Bath Geek LLC is a small manufacturer of hypoallergenic bath products. I sell over Etsy and my Square storefront.

This business is operated out of my home (basement).

City of Commerce City  
7887 East 60th Avenue  
Commerce City, CO 80022-4199  
(303) 289-3600

Date: 10/06/2017  
Receipt: 2017-00010808  
Cashier: Yadira Dosal  
Received From: Bath Greek LLC

CD011	20.00
Receipt Total	20.00
Total Check #131	20.00
Total Remitted	20.00
Total Received	20.00



**LIST POINT OF CONTACT FOR TAX AND AUDIT INQUIRIES:**

**Tax Contact Name:** Ai Ling Chow

**Phone:** 720-335-5218

**Email:** ai@bathgeek.com

**Federal Employer ID No. (FEIN):** 82-2752542

**Colorado State ID:** \_\_\_\_\_

**First Day of Business in Commerce City:** 9/15/17

**Estimated Tax Due:** 0

**Filing Frequency:** ☐ Monthly (more than \$50 tax/month)

**No. of Employees:** 0

☐ Quarterly (less than \$50 tax/month)

**Full Time:**

☒ Annually (less than \$10 tax/month)

**Part Time:**

**PLEASE LIST ALL PRIMARY OWNERS, PARTNERS, OFFICERS OR MEMBERS IN THE BUSINESS:**

**Name:** Ai Ling Chow

**Title:** Owner

**Address:** 15471 Village Circle

**City:** Brighton

**State:** CO

**Zip:** 80603

**Phone:** 720-335-5218

**Email:** ai@bathgeek.com

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_

**State:** \_\_\_\_\_

**Zip:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_

**State:** \_\_\_\_\_

**Zip:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

*Attach additional ownership/officer sheets if necessary.*

**IF YOU ACQUIRED THE BUSINESS IN WHOLE OR IN PART, PLEASE COMPLETE OR ☒ N/A**

**Prior Owner's Name:** \_\_\_\_\_

**Prior Owner's Address:** \_\_\_\_\_

**City:** \_\_\_\_\_

**State:** \_\_\_\_\_

**Zip:** \_\_\_\_\_





Date of Acquisition: \_\_\_\_\_

Purchase Price: \_\_\_\_\_

Price of Personal Property (Furniture, Fixtures, Equipment & Supplies): \_\_\_\_\_

**PROVIDE COPIES OF ANY OTHER PERMITS NEEDED TO REGULATE BUSINESS:**

- ☐ Colorado Department of Regulatory Affairs      ☐ Colorado Department of Public Health & Environment  
☐ Tri-County Health Department      ☐ Colorado Department of Labor & Employment  
☐ Colorado Department of Human Services      ☐ Other (specify): 35T  
☒ Not Applicable (N/A)

**Do you store or display outdoor materials?**

- ☒ No      ☐ Yes, specify type \_\_\_\_\_

**Do you store or use hazardous materials?**

- ☐ No      ☒ Yes, specify. Lye (NaOH) and caustic potash (KOH)

*Fully used in  
Soapmaking, no  
hazardous waste.*

I hereby certify under penalty of perjury that the statements made herein are true, correct and complete to the best of my knowledge. I hereby acknowledge and agree that if I have provided any false or misleading information herein, the City of Commerce City is authorized to immediately suspend or revoke any license issued pursuant to this application and issue a Stop Work Order to the licensed business. I further agree that I and the business named herein shall comply with all requirements of the ordinances and regulations of the City of Commerce City, including the duty to supplement the information provided herein. This application is only for a City of Commerce City business license; additional land use, zoning, building permit or license approvals may be required.

Applicant Signature: \_\_\_\_\_

Title: Owner

Date: 9/25/17

Applicant Name (Printed): Ai Ling Chow

Direct Phone Number: 720-335-5218

The City will occasionally email you relevant business and regulatory information unless you decide to opt out by checking this box ☐.

**For this Record...**

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FAQs, Glossary and Information

## Summary

Details			
Name	Bath Geek LLC		
Status	Good Standing	Formation date	09/10/2017
ID number	20171685294	Form	Limited Liability Company
Periodic report month	September	Jurisdiction	Colorado
Principal office street address	15471 Village Circle, Brighton, CO 80603, United States		
Principal office mailing address	n/a		

Registered Agent	
Name	Ai Ling Chow
Street address	15471 Village Circle, Brighton, CO 80603, United States
Mailing address	15471 Village Circle, Brighton, CO 80603, United States

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## Bauer, Laura - CM

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**From:** Ai (Bath Geek) <ai@bathgeek.com>  
**Sent:** Saturday, October 28, 2017 11:42 PM  
**To:** Bauer, Laura - CM  
**Cc:** ccity@bathgeek.com  
**Subject:** Re: Business License Application  
**Attachments:** DRY\_CAUSTIC\_POTASH.pdf; sodiumhydroxide.pdf

Dear Ms Bauer,

Please see inline responses below. If you need any more information, please let me know. Thank you!

Best regards,  
Ai

On Fri, Oct 27, 2017 at 12:44 PM, Bauer, Laura - CM <[lbauer@c3gov.com](mailto:lbauer@c3gov.com)> wrote:

Your general business license application for Bath Geek, LLC has been reviewed by our planning and building departments and I have been asked to gather some more information from you before we can complete the review process.

(1) Please provide a list of materials used in your soap making operation

Olive oil, lye, potash, distilled water, sugar, mica colorants, fragrance oils. I also use baking soda, cream of tartar, sea salt, cocoa butter, shea butter, citric acid, and SLSa (sodium laureth sulfoacetate).

(2) If using lye and potash, please provide safety data sheets for each ingredient

Attached is the MSDS for my lye and potash.

(3) Indicate quantities of each material being stored on site

Lye - Less than 55lbs of lye at any given time (I only order 50lbs at a time, and only when supplies are below 5lbs.)

Potash - Less than 11lbs of potash at any given time (I only order 10 lbs at a time, and only when supplies are below 1lb.)

(4) Provide a detailed description of the complete process used including any equipment being used.

1. I weigh distilled water sufficient to dissolve the lye and potash I need into a borosilicate glass beaker (scientific supply). I then dissolve a small amount of sugar into the water (15g sugar per lb of oil). (I am considering switching to a stainless steel container for this because I believe stainless steel will better weather the extreme temperature changes. My borosilicate glass beakers are lab-quality and can tolerate the temperature fluctuations, but over the long term lye solution can and will etch glass.)

2. I put on protective gear: goggles, respirator, rubber apron, rubber elbow gloves. Then I measure out my required amounts of lye and potash and dissolve those in water, stirring with a glass stirring rod if necessary (it's



always necessary). I only remove my protective equipment after the lye has been dissolved and the water is clear again.

3. While the lye solution is cooling, I prepare the rest of my ingredients such as oil, mica, fragrances, etc and measure them according to a predetermined recipe. I weigh my required oil into a plastic bucket that is either plastic #2 or plastic #5.

4. I don my protective apron and rubber gloves, and then carefully pour the lye solution into the oil. Using a stick blender, I blend to emulsion and then to the desired consistency, which ranges from very liquid (soup) to somewhat thick (gravy) depending on what coloring method I wish to use and whether or not my chosen fragrance will accelerate trace.

5. I then separate the soap batter into sections using smaller plastic #2 or plastic #5 containers and add colorants and fragrances where desired. Then I pour the soap batter into prepared molds and swirl/decorate as desired.

6. I tap the molds to settle the batter and to encourage bubbles to float to the top. Then I spray isopropyl alcohol on exposed surfaces to avoid the formation of soda ash.

7. I let the soap set in a closed room away from pets until it is ready to unmold. Finally I will unmold and cut the soap with a wire cutter (I currently use a cheese slicer.)

8. The soap is returned to the controlled room (away from pets) and allowed to cure for a minimum of 4 weeks.

9. When soap is sold I shrink wrap it and label it just before shipping.

Thank you for your attention to this matter.

Laura Bauer, MMC

City Clerk

City of Commerce City

[7887 E. 60<sup>th</sup> Ave.](#)

Commerce City, CO 80022

[\(303\)289-3676](#)

[lbauer@c3gov.com](mailto:lbauer@c3gov.com)

## Bauer, Laura - CM

---

**From:** Bauer, Laura - CM  
**Sent:** Friday, October 27, 2017 12:42 PM  
**To:** 'ccity@bathgeek.com'  
**Subject:** Business License Application

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- (1) Please provide a list of materials used in your soap making operation
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- (3) Indicate quantities of each material being stored on site
- (4) Provide a detailed description of the complete process used including any equipment being used.

Thank you for your attention to this matter.

Laura Bauer, MMC  
City Clerk  
City of Commerce City  
7887 E. 60<sup>th</sup> Ave.  
Commerce City, CO 80022  
(303)289-3676  
[lbauer@c3gov.com](mailto:lbauer@c3gov.com)

*10/27/17 - Please file in pending business license apps.*

# SAFETY DATA SHEET

## 1. Identification

Product identifier **CAUSTIC SODA BEADS IMP**  
 Other means of identification **None.**  
 Recommended use **ALL PROPER AND LEGAL PURPOSES**  
 Recommended restrictions **None known.**

### Manufacturer/Importer/Supplier/Distributor information

#### Distributor

Company name **Duda Energy LLC**  
 Address **1112 Brooks St.  
 Decatur, AL 35601**  
 Telephone **256.340.4866**  
 E-mail **Not available.**  
 Emergency phone number **800.255.3924 Chemtel**

## 2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

#### Label elements



Signal word **Danger**

Hazard statement **May be corrosive to metals. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.**

#### Precautionary statement

**Prevention** Keep only in original container. Wash thoroughly after handling. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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/doctor. Take off contaminated clothing and wash before reuse. Absorb spillage to prevent material damage.

**Storage** Store locked up. Store in corrosive resistant container with a resistant inner liner.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) **None known.**

Supplemental information **None.**



### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
SODIUM HYDROXIDE		1310-73-2	100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p>
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

## 7. Handling and storage

### Precautions for safe handling

Provide adequate ventilation. Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
SODIUM HYDROXIDE (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Material	Type	Value
SODIUM HYDROXIDE (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
SODIUM HYDROXIDE (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

**Physical state** Solid.

**Form** Solid.

**Color** White

**Odor** ODORLESS

**Odor threshold** Not available.

**pH** 12 0.05% wt/wt solution

**Melting point/freezing point** 613.4 °F (323 °C)  
603 °F (317.22 °C)

**Initial boiling point and boiling range** 2530.4 °F (1388 °C)

**Flash point** 999.0 °F (537.2 °C)



Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.0000001 kPa at 25 °C 0.13 kPa at 739 °C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	1110 g/l
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
<b>Other information</b>	
Density	17.77 lbs/gal estimated
Dynamic viscosity	4 mPa.s
Dynamic viscosity temperature	662 °F (350 °C)
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Molecular formula	H-Na-O
Molecular weight	40 g/mol
Oxidizing properties	Not oxidizing.
Specific gravity	2.13 at 25 °C

## 10. Stability and reactivity

Reactivity	Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials	Strong acids. Acids. Strong oxidizing agents. Oxidizing agents. Metals.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. Harmful in contact with skin.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
--	---

### Information on toxicological effects

Acute toxicity	Harmful in contact with skin.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.

## 12. Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects.
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Product	Species		Test Results
SODIUM HYDROXIDE (CAS 1310-73-2)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	125 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

DOT	
UN number	UN1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	
Class	8
Subsidiary risk	-

Material name: CAUSTIC SODA BEADS IMP

Packing group II  
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.  
ERG number 154  
DOT information on packaging may be different from that listed.

**DOT**



**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

SODIUM HYDROXIDE (CAS 1310-73-2) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Total food additive  
Direct food additive  
GRAS food additive

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.



US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

SODIUM HYDROXIDE (CAS 1310-73-2)

US. Massachusetts RTK - Substance List

SODIUM HYDROXIDE (CAS 1310-73-2)

US. New Jersey Worker and Community Right-to-Know Act

SODIUM HYDROXIDE (CAS 1310-73-2)

US. Pennsylvania Worker and Community Right-to-Know Law

SODIUM HYDROXIDE (CAS 1310-73-2)

US. Rhode Island RTK

SODIUM HYDROXIDE (CAS 1310-73-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

#### HMIS® ratings

Health: 3  
Flammability: 0  
Physical hazard: 0

#### NFPA ratings

Health: 3  
Flammability: 0  
Instability: 0

#### Disclaimer

The information provided in this safety data sheet is correct to the best of Duda Energy LLC's 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. This safety datasheet only contains information relating to safety and does not replace any product information or product specification. Please note, the content may be changed, corrected, or deleted at any time without notice, and may not always necessarily reflect the most current data. Duda Energy LLC. will assume no responsibility for any trouble or failure caused by the errors in the information provided, nor any damage associated with the usage of the information.

## Bauer, Laura - CM

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**From:** Ai (Bath Geek) <ai@bathgeek.com>  
**Sent:** Saturday, October 28, 2017 11:42 PM  
**To:** Bauer, Laura - CM  
**Cc:** ccity@bathgeek.com  
**Subject:** Re: Business License Application  
**Attachments:** DRY\_CAUSTIC\_POTASH.pdf; sodiumhydroxide.pdf

Dear Ms Bauer,

Please see inline responses below. If you need any more information, please let me know. Thank you!

Best regards,  
Ai

On Fri, Oct 27, 2017 at 12:44 PM, Bauer, Laura - CM <[lbauer@c3gov.com](mailto:lbauer@c3gov.com)> wrote:

Your general business license application for Bath Geek, LLC has been reviewed by our planning and building departments and I have been asked to gather some more information from you before we can complete the review process.

(1) Please provide a list of materials used in your soap making operation

Olive oil, lye, potash, distilled water, sugar, mica colorants, fragrance oils. I also use baking soda, cream of tartar, sea salt, cocoa butter, shea butter, citric acid, and SLSa (sodium laureth sulfoacetate).

(2) If using lye and potash, please provide safety data sheets for each ingredient

Attached is the MSDS for my lye and potash.

(3) Indicate quantities of each material being stored on site

Lye - Less than 55lbs of lye at any given time (I only order 50lbs at a time, and only when supplies are below 5lbs.)

Potash - Less than 11lbs of potash at any given time (I only order 10 lbs at a time, and only when supplies are below 1lb.)

(4) Provide a detailed description of the complete process used including any equipment being used.

1. I weigh distilled water sufficient to dissolve the lye and potash I need into a borosilicate glass beaker (scientific supply). I then dissolve a small amount of sugar into the water (15g sugar per lb of oil). (I am considering switching to a stainless steel container for this because I believe stainless steel will better weather the extreme temperature changes. My borosilicate glass beakers are lab-quality and can tolerate the temperature fluctuations, but over the long term lye solution can and will etch glass.)

2. I put on protective gear: goggles, respirator, rubber apron, rubber elbow gloves. Then I measure out my required amounts of lye and potash and dissolve those in water, stirring with a glass stirring rod if necessary (it's



always necessary). I only remove my protective equipment after the lye has been dissolved and the water is clear again.

3. While the lye solution is cooling, I prepare the rest of my ingredients such as oil, mica, fragrances, etc and measure them according to a predetermined recipe. I weigh my required oil into a plastic bucket that is either plastic #2 or plastic #5.

4. I don my protective apron and rubber gloves, and then carefully pour the lye solution into the oil. Using a stick blender, I blend to emulsion and then to the desired consistency, which ranges from very liquid (soup) to somewhat thick (gravy) depending on what coloring method I wish to use and whether or not my chosen fragrance will accelerate trace.

5. I then separate the soap batter into sections using smaller plastic #2 or plastic #5 containers and add colorants and fragrances where desired. Then I pour the soap batter into prepared molds and swirl/decorate as desired.

6. I tap the molds to settle the batter and to encourage bubbles to float to the top. Then I spray isopropyl alcohol on exposed surfaces to avoid the formation of soda ash.

7. I let the soap set in a closed room away from pets until it is ready to unmold. Finally I will unmold and cut the soap with a wire cutter (I currently use a cheese slicer.)

8. The soap is returned to the controlled room (away from pets) and allowed to cure for a minimum of 4 weeks.

9. When soap is sold I shrink wrap it and label it just before shipping.

Thank you for your attention to this matter.

Laura Bauer, MMC

City Clerk

City of Commerce City

[7887 E. 60<sup>th</sup> Ave.](#)

Commerce City, CO 80022

[\(303\)289-3676](#)

[lbauer@c3gov.com](mailto:lbauer@c3gov.com)

# SAFETY DATA SHEET

M31867 - ANSI - EN



**Occidental Chemical Corporation**

A subsidiary of Occidental Petroleum Corporation



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## DRY CAUSTIC POTASH (ALL GRADES)

SDS No.: M31867

SDS Revision Date: 04-Mar-2016

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### SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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<b>Company Identification:</b>	Occidental Chemical Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, TX 75380-9050 1-800-752-5151
<b>24 Hour Emergency Telephone Number:</b>	1-800-733-3665 or 1-972-404-3228 (U.S.); CHEMTREC (outside U.S.): +1 703-527-3887; +(56)-25814934 (Chile); 4001-204937 (China); 800-968-793 (Hong Kong); +(61)-290372994 (Australia); CHEMTREC Contract No: CCN 16186
<b>To Request an SDS:</b>	MSDS@oxy.com or 1-972-404-3245
<b>Customer Service:</b>	1-800-752-5151 or 1-972-404-3700
<b>Product Identifier:</b>	<b>DRY CAUSTIC POTASH (ALL GRADES)</b>
<b>Trade Name:</b>	Caustic Potash-Crystal; Caustic Potash-Flake; Caustic Potash-Flake 90%; Dry Caustic Potash (Off Spec)
<b>Synonyms:</b>	Potassium hydroxide, KOH Dry, Caustic Potash-Anhydrous
<b>Product Use:</b>	Manufacture of substances, Formulation, Glass Production, Cleaner, Process cleaner, Petroleum Industry, Food processing, Fertilizer, Chemical Intermediate, Coatings and paints, fillers, putties, thinners, Washing and cleaning products, Electrical batteries and accumulators, Extraction agents, pH adjustment, Neutralization agent, Precipitants, Flocculants
<b>Uses Advised Against:</b>	None identified

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**DRY CAUSTIC POTASH (ALL GRADES)**

SDS No.: M31867

SDS Revision Date: 04-Mar-2016

**SECTION 2. HAZARDS IDENTIFICATION**

**OSHA REGULATORY STATUS:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

\*\*\*\*\*

**EMERGENCY OVERVIEW:**

**Color:** White, Off-white  
**Physical State:** Solid  
**Odor:** Odorless  
**Signal Word:** **DANGER**

**MAJOR HEALTH HAZARDS:** CORROSIVE. CAUSES SERIOUS EYE DAMAGE. CAUSES SEVERE SKIN BURNS. HARMFUL IF SWALLOWED.

**PHYSICAL HAZARDS:** MAY BE CORROSIVE TO METALS. Mixing with water, acid or incompatible materials may cause splattering and release of heat. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated.

**ECOLOGICAL HAZARDS:** This material has exhibited moderate toxicity to aquatic organisms.

**PRECAUTIONARY STATEMENTS:** Wear protective gloves, protective clothing, eye, and face protection. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Do not breathe dust. Do not ingest. Do not eat, drink, or smoke when using this product. Keep container tightly closed. Use only with adequate ventilation.

**ADDITIONAL HAZARD INFORMATION:** Toxicity may be delayed, and may not be readily visible. Significant exposures must be referred for medical attention immediately. There is no specific antidote.

\*\*\*\*\*

**GHS CLASSIFICATION:**

GHS: PHYSICAL HAZARDS:	Corrosive to Metals Mixing with water may cause splattering and release of heat
GHS: CONTACT HAZARD - SKIN:	Category 1B - Causes severe skin burns and eye damage.
GHS: CONTACT HAZARD - EYE:	Category 1 - Causes serious eye damage
GHS: ACUTE TOXICITY - ORAL:	Category 4 - Harmful if swallowed.
GHS: CARCINOGENICITY:	Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC or OSHA.
GHS: HAZARDOUS TO AQUATIC ENVIRONMENT - ACUTE HAZARD:	Category 3 - Harmful to aquatic life

## DRY CAUSTIC POTASH (ALL GRADES)

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**UNKNOWN ACUTE TOXICITY:** A percentage of this product consists of ingredient(s) of unknown acute toxicity.

**Unknown Acute Dermal Toxicity:**

There is no acute dermal toxicity data available for this material. 100% of this product consists of ingredient(s) of unknown acute dermal toxicity.

**Unknown Acute Inhalation Toxicity:**

There is no acute inhalation toxicity data available for this material. 100% of this product consists of ingredient(s) of unknown acute inhalation toxicity.

**GHS SYMBOL:** Corrosive, Exclamation mark



**GHS SIGNAL WORD:** DANGER

**GHS HAZARD STATEMENTS:**

**GHS - Physical Hazard Statement(s)**

- May be corrosive to metals

**GHS - Health Hazard Statement(s)**

- Causes serious eye damage
- Causes severe skin burns and eye damage
- Harmful if swallowed

**GHS - Precautionary Statement(s) - Prevention**

- Wear protective gloves/protective clothing/eye protection/face protection
- Wash thoroughly after handling
- Do not breathe dust, fume, gas, mist, vapors, or spray
- Do not eat, drink or smoke when using this product
- Keep only in original container

**GHS - Precautionary Statement(s) - Response**

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- Immediately call a POISON CENTER or doctor/physician
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)
- Absorb spillage to prevent material damage

**DRY CAUSTIC POTASH (ALL GRADES)**

SDS No.: M31867

SDS Revision Date: 04-Mar-2016

**GHS - Precautionary Statement(s) - Storage**

- Store in corrosive resistant and NON-ALUMINUM container with a resistant inner liner (NOTE: flammable hydrogen gas may be generated if aluminum container and/or aluminum fittings are used)
- Store locked up

**GHS - Precautionary Statement(s) - Disposal**

- Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

**Hazards Not Otherwise Classified (HNOC)**

None identified

See Section 11: TOXICOLOGICAL INFORMATION

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms: Potassium hydroxide, KOH Dry, Caustic Potash-Anhydrous

Component	Percent [%]	CAS Number
Potassium hydroxide	84.0 - 92.0	1310-58-3
Water	8.0 - 16.0	7732-18-5

**SECTION 4. FIRST AID MEASURES**

**INHALATION:** If inhalation of dust occurs and adverse effects result, remove to uncontaminated area. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY.

**SKIN CONTACT:** Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry and shoes. Wash contaminated areas with large amounts of water. GET MEDICAL ATTENTION IMMEDIATELY. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods.

**EYE CONTACT:** Immediately flush contaminated eyes with a directed stream of water for as long as possible. Remove contact lenses, if present, then continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY.

**INGESTION:** If swallowed, do not induce vomiting. For definite or probable ingestion, do not administer oral fluids. If vomiting occurs spontaneously, keep airway clear. Monitor airway. Volume resuscitation (IV fluids) and circulatory support (CPR) may be required. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

**Most Important Symptoms/Effects (Acute and Delayed)** Corrosive. This material may be corrosive to any tissue it comes in contact with. It can cause serious burns and extensive tissue destruction resulting in: liquefaction, necrosis, and/or perforation.



## DRY CAUSTIC POTASH (ALL GRADES)

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**Acute Symptoms/Effects:** Listed below.

**Inhalation (Breathing):** Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. Aspiration of this material may cause the same conditions.

**Skin:** Skin Corrosion: When skin is exposed to solid product with moisture, may cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of skin, and damage to underlying tissues (deep and painful wounds).

**Eye:** Serious Eye Damage. Eye exposures may cause eye lid burns, conjunctivitis, corneal edema, corneal burn, corneal perforation, damage to internal contents of the eye, permanent visual defects, and blindness and/or loss of the eye.

**Ingestion (Swallowing):** Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

**Delayed Symptoms/Effects:**

- Repeated or prolonged exposures to skin that cause irritation may cause a chronic dermatitis

**Medical Conditions Aggravated by Exposure:** Corrosive. May aggravate pre-existing eye, skin, and respiratory conditions (including asthma and other breathing disorders).

**Protection of First-Aiders:** Protect yourself by avoiding contact with this material. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. Avoid contact with skin and eyes. Do not ingest. Do not breathe dust. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

**Notes to Physician:** Medical observation and assessment is recommended for all ingestions, all eye exposures, and symptomatic inhalation and dermal exposures. For symptomatic ingestion, do not administer oral fluids and consider investigation by endoscopy, X-ray, or CT scan. Esophageal perforation, airway compromise, hypotension, and shock are possible. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation. Surgical intervention may be required.

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## SECTION 5. FIRE-FIGHTING MEASURES

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**Fire Hazard:** Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. May react with chemically reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixtures in air.

**Extinguishing Media:** Use extinguishing agents appropriate for surrounding fire. Use water spray to keep containers cool. Avoid direct contact of this product with water as this can cause an exothermic reaction.

**Fire Fighting:** Move container from fire area if it can be done without risk. Cool containers with water. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Avoid contact with skin and eyes. Avoid inhalation of material or combustion by-products.

**Hazardous Combustion Products:**

No information available

## DRY CAUSTIC POTASH (ALL GRADES)

SDS No.: M31867

SDS Revision Date: 04-Mar-2016

**Sensitivity to Mechanical Impact:** Not sensitive.

**Sensitivity to Static Discharge:** Not sensitive.

**Lower Flammability Level (air):** Not flammable

**Upper Flammability Level (air):** Not flammable

**Flash point:** Not flammable

**Auto-ignition Temperature:** Not determined

**GHS: PHYSICAL HAZARDS:**

- Corrosive to Metals
- Mixing with water may cause splattering and release of heat

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:**

Avoid contact with skin, eyes and clothing. Do not breathe vapors, fumes or mist. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

**Methods and Materials for Containment and Cleaning Up:**

Shovel dry material into suitable container. Recycle or dispose according to regulations.

**Environmental Precautions:**

Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

---

## SECTION 7. HANDLING AND STORAGE

**Precautions for Safe Handling:**

Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

**Safe Storage Conditions:**

Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Store in a cool, dry, well ventilated area. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

**Incompatibilities/ Materials to Avoid:**

Acids, halogenated compounds, and prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys, water

**DRY CAUSTIC POTASH (ALL GRADES)**

SDS No.: M31867

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**GHS: PHYSICAL HAZARDS:**

- Corrosive to Metals
- Mixing with water may cause splattering and release of heat

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Regulatory Exposure Limit(s):** None. This product does not contain any components that have non-regulatory occupational exposure limits (OEL's).

**OEL:** Occupational Exposure Limit; **OSHA:** United States Occupational Safety and Health Administration; **PEL:** Permissible Exposure Limit; **TWA:** Time Weighted Average; **STEL:** Short Term Exposure Limit

**NON-REGULATORY EXPOSURE LIMIT(S):** Listed below for the product components that have non-regulatory occupational exposure limits (OEL's).

Component	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Potassium hydroxide	-----	-----	2 mg/m <sup>3</sup>	-----	-----	2 mg/m <sup>3</sup>

- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

Component	OXY REL 8 hr TWA	OXY REL STEL	OXY REL Ceiling
Potassium hydroxide 1310-58-3 ( 84.0 - 92.0 )			2 mg/m <sup>3</sup>

**ENGINEERING CONTROLS:** Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT:**

**Eye Protection:** Wear chemical safety goggles with a face-shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin and Body Protection:** Wear protective clothing to minimize skin contact. When potential for contact with wet material exists, wear Tychem® or similar chemical protective suit. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Always place pants legs over boots. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods.

**Hand Protection:** Wear chemical protective gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

**DRY CAUSTIC POTASH (ALL GRADES)**

SDS No.: M31867

SDS Revision Date: 04-Mar-2016

**Protective Material Types:**

Butyl rubber, Natural rubber, Nitrile, Polyvinyl chloride (PVC), Tychem®, Tyvek®

**Respiratory Protection:** A NIOSH approved respirator with N95 dust/mist filter (1/2 facepiece) or N100 dust/mist filter (full facepiece) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. If eye irritation occurs, a full face style mask should be used. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Solid
<b>Color:</b>	White, Off-white
<b>Odor:</b>	Odorless
<b>Odor Threshold [ppm]:</b>	Not applicable.
<b>Molecular Weight:</b>	56.11
<b>Molecular Formula:</b>	KOH
<b>Boiling Point/Range:</b>	Not applicable
<b>Melting Point/Range:</b>	752 °F (400 °C)
<b>Vapor Pressure:</b>	60 mmHg @ 1013 °C
<b>Vapor Density (air=1):</b>	Not applicable
<b>Relative Density/Specific Gravity (water=1):</b>	2.044 @ 20 °C
<b>Density:</b>	2.04 gm/cc @ 20 °C
<b>Water Solubility:</b>	100%
<b>pH:</b>	Not applicable
<b>Volatility:</b>	0%
<b>Evaporation Rate (ether=1):</b>	Not applicable
<b>Partition Coefficient (n-octanol/water):</b>	No information available
<b>Flash point:</b>	Not flammable
<b>Flammability (solid, gas):</b>	Not flammable
<b>Lower Flammability Level (air):</b>	Not flammable
<b>Upper Flammability Level (air):</b>	Not flammable
<b>Auto-ignition Temperature:</b>	Not determined
<b>Viscosity:</b>	Not applicable

**SECTION 10. STABILITY AND REACTIVITY**

**Reactivity:** Soluble in water, releasing heat sufficient to ignite combustibles. Reacts with acids, giving off heat.

**Chemical Stability:** Stable at normal temperatures and pressures.

**DRY CAUSTIC POTASH (ALL GRADES)**

SDS No.: M31867

SDS Revision Date: 04-Mar-2016

**Possibility of Hazardous Reactions:**

Mixing with water, acid, or incompatible materials may cause splattering and release of large amounts of heat. When moist, reacts with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

**Conditions to Avoid:** (e.g., static discharge, shock, or vibration) -. No information available.

**Incompatibilities/ Materials to Avoid:** Acids, halogenated compounds, and prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys. water.

**Hazardous Decomposition Products:** None known

**Hazardous Polymerization:** Will not occur.

**SECTION 11. TOXICOLOGICAL INFORMATION****TOXICITY DATA:****PRODUCT TOXICITY DATA: DRY CAUSTIC POTASH (ALL GRADES)**

<b><u>LD50 Oral:</u></b> 365 mg/kg oral-rat LD50	<b><u>LD50 Dermal:</u></b> No data available	<b><u>LC50 Inhalation:</u></b> No data available
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**COMPONENT TOXICITY DATA:**

**Note:** The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

<b>Component</b>	<b>LD50 Oral:</b>	<b>LD50 Dermal:</b>	<b>LC50 Inhalation:</b>
Potassium hydroxide 1310-58-3	284 mg/kg (Rat)	----	----
Water 7732-18-5	90 mL/kg (Rat)	----	----

\*\*\*\*\*

**POTENTIAL HEALTH EFFECTS:**

<b>Eye contact:</b>	Corrosive. Causes serious eye damage which can result in: severe irritation, pain and burns, and permanent damage including blindness.
<b>Skin contact:</b>	Corrosive. Causes severe skin burns. Prolonged or repeat skin exposures can result in dermatitis.
<b>Inhalation:</b>	May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. This material can be extremely destructive to the tissue of the mucus membranes and respiratory system.



## DRY CAUSTIC POTASH (ALL GRADES)

SDS No.: M31867

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**Ingestion:**

Toxic if swallowed. Corrosive. May cause severe mucus membrane burns and gastrointestinal burns. If swallowed, may pose a lung aspiration hazard during vomiting. Lung aspiration may result in chemical pneumonitis, pulmonary edema, and damage to lung tissue or death.

**SIGNS AND SYMPTOMS OF EXPOSURE:**

Signs and symptoms of exposure vary, and are dependent on the route of exposure, degree of exposure, and duration of exposure.

**Inhalation (Breathing):** Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. Aspiration of this material may cause the same conditions.

**Skin:** Skin Corrosion: When skin is exposed to solid product with moisture, may cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of skin, and damage to underlying tissues (deep and painful wounds).

**Eye:** Serious Eye Damage. Eye exposures may cause eye lid burns, conjunctivitis, corneal edema, corneal burn, corneal perforation, damage to internal contents of the eye, permanent visual defects, and blindness and/or loss of the eye.

**Ingestion (Swallowing):** Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

**ACUTE TOXICITY:**

When in solution, this material will affect all tissues with which it comes in contact. The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact.

**CHRONIC TOXICITY:**

Repeated and prolonged skin contact may result in dermatitis.

\*\*\*\*\*

**GHS HEALTH HAZARDS:**

Listed below.

**GHS: ACUTE TOXICITY - ORAL:** Category 4 - Harmful if swallowed.

**GHS: CONTACT HAZARD - EYE:** Category 1 - Causes serious eye damage

**GHS: CONTACT HAZARD - SKIN:** Category 1B - Causes severe skin burns and eye damage

**Skin Absorbent / Dermal Route?** No.

**GHS: CARCINOGENICITY:**

Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC or OSHA.

## DRY CAUSTIC POTASH (ALL GRADES)

SDS No.: M31867

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## SECTION 12. ECOLOGICAL INFORMATION

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### ECOTOXICITY DATA:

#### Aquatic Toxicity:

This material is alkaline and may raise the pH of surface waters with low buffering capacity. This material has exhibited moderate toxicity to aquatic organisms.

### FATE AND TRANSPORT:

**BIODEGRADATION:** This material is inorganic and not subject to biodegradation

**PERSISTENCE:** This material is alkaline and may raise the pH of surface waters with low buffering capacity  
This material is believed to exist in the disassociated state in the environment

**BIOCONCENTRATION:** This material is not expected to bioconcentrate in organisms.

**BIOACCUMULATIVE POTENTIAL:** Potassium hydroxide is a strong alkaline substance that dissociates completely in water to K<sup>+</sup> and OH<sup>-</sup>. Considering its high water solubility, potassium hydroxide is not expected to bioconcentrate in organisms. Log Pow is not applicable for an inorganic compound that dissociates.

**MOBILITY IN SOIL:** Potassium hydroxide is not expected to be absorbed in soil due to its dissociation properties and high water solubility.

**ADDITIONAL ECOLOGICAL INFORMATION:** This material has exhibited slight toxicity to terrestrial organisms. The risk that potassium hydroxide poses for the environment is essentially restricted to a pH increase of the aquatic compartment, which is dependent on the hardness of the waters.

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## SECTION 13. DISPOSAL CONSIDERATIONS

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### **Waste from material:**

Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations.

### **Container Management:**

Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

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## SECTION 14. TRANSPORT INFORMATION

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### LAND TRANSPORT

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**U.S. DOT 49 CFR 172.101:**

UN NUMBER: UN1813  
PROPER SHIPPING NAME: Potassium hydroxide, solid  
HAZARD CLASS/ DIVISION: 8  
PACKING GROUP: II  
LABELING REQUIREMENTS: 8  
RQ (lbs): RQ 1,000 Lbs. (Potassium hydroxide)

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**

UN NUMBER: UN1813  
SHIPPING NAME: Potassium hydroxide, solid  
CLASS OR DIVISION: 8  
PACKING/RISK GROUP: II  
LABELING REQUIREMENTS: 8

**MARITIME TRANSPORT (IMO / IMDG) :**

UN NUMBER: UN1813  
PROPER SHIPPING NAME: Potassium hydroxide, solid  
HAZARD CLASS / DIVISION: 8  
Packing Group: II  
LABELING REQUIREMENTS: 8

**SECTION 15. REGULATORY INFORMATION****U.S. REGULATIONS****OSHA REGULATORY STATUS:**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):**

If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 426-2675.

Component	CERCLA Reportable Quantities:
Potassium hydroxide	1000 lb (final RQ)

**SARA EHS Chemical (40 CFR 355.30)**

Not regulated

**EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):**

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SDS No.: M31867

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Acute Health Hazard

**EPCRA SECTION 313 (40 CFR 372.65):**

Not regulated

**OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):**

Not regulated

**FDA:** This material has Generally Recognized as Safe (GRAS) status under specific FDA regulations. Additional information is available from the Code of Federal Regulations which is accessible on the FDA's website. This product is not produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the Food and Drug Administration (FDA).

**NATIONAL INVENTORY STATUS**

Component	<b><u>U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):</u></b>
Potassium hydroxide 1310-58-3 (84.0 - 92.0 %)	Listed

**TSCA 12(b):** This product is not subject to export notification.

**Canadian Chemical Inventory:** All components of this product are listed on either the DSL or the NDSL.

**STATE REGULATIONS**

Component	California Proposition 65 Cancer WARNING:	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Potassium hydroxide 1310-58-3	Not Listed	Not Listed	Not Listed	Listed	1571	Listed-corrosive

Component	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List
Potassium hydroxide 1310-58-3	Not Listed	Listed	Not Listed	Present	Listed

**CANADIAN REGULATIONS**

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

**WHMIS - Classifications of Substances:**

- D1B - Poisonous and Infectious Material; Materials causing immediate and serious toxic effects - Toxic material
- E - Corrosive material

## DRY CAUSTIC POTASH (ALL GRADES)

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### SECTION 16. OTHER INFORMATION

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Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 04-Mar-2016

Health Rating: 3

Flammability Rating: 0

Reactivity Rating: 1

Health Rating: 3

Flammability: 0

Reactivity Rating: 1

**Reason for Revision:**

- Changed GHS Classification: SEE SECTION 2
- Updated First Aid Measures: SEE SECTION 4
- Toxicological Information has been revised: SEE SECTION 11

**IMPORTANT:**

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

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**End of Safety Data Sheet**