SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>Kettle Wash Powder</td>
</tr>
<tr>
<td>Product code</td>
<td>7131</td>
</tr>
<tr>
<td>BIG no</td>
<td>10037</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Low Foam Caustic Cleaner

1.3. Details of the supplier of the safety data sheet

Ace Chemical Products, Inc.
8415 N. 87th Street
Milwaukee, WI 53224 - USA
T (414) 357-8515 - F (414) 357-8528
info@acechem.com - www.acechem.com

1.4. Emergency telephone number

Emergency number: For help in chemical emergencies, call Chemtrec day or night Chemtrec 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Met. Corr. 1 H290
Acute Tox. 4 (Dermal) H312
Skin Corr. 1A H314

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US):
![GHS505]

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H314 - Causes severe skin burns and eye damage
H290 - May be corrosive to metals

Precautionary statements (GHS-US):
P260 - Do not breathe dust, mist, spray
P264 - Wash all exposed body parts thoroughly after handling
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor, a POISON CENTER
P321 - Specific treatment - see First Aid measures on this label
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P406 - Store in corrosion-resistant container with a resistant inner liner
P501 - Dispose of contents/container to proper treatment facilities in accordance with all applicable local, state & federal regulations

2.3. Other hazards

Other hazards not contributing to the classification: None under normal conditions.
2.4. Unknown acute toxicity (GHS-US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| sodium hydroxide    | (CAS No) 1310-73-2| 75 - 85 | Met. Corr. 1, H290  
Acute Tox. 4 (Dermal), H312  
Skin Corr. 1A, H314 |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Cover eyes aseptically. Take victim to an ophthalmologist. Do not apply neutralizing agents. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Do not give chemical antidote. Immediately call a POISON CENTER or doctor/physician. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed


Symptoms/injuries after eye contact: Corrosion of the eye tissue. Permanent eye damage.


Chronic symptoms: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation. Possible inflammation of the respiratory tract. Gastrointestinal complaints.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: No unsuitable extinguishing media known. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: DIRECT FIRE HAZARD. Non combustible, INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard: INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".
### Reactivity
- Reacts exothermically with water (moisture): release of toxic and corrosive gases/vapours. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). Absorbs the atmospheric CO2. Violent to explosive reaction with (some) acids. Reacts violently with many compounds: heat release resulting in increased fire or explosion risk.

### 5.3. Advice for firefighters
#### Firefighting instructions
- Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

#### Protection during firefighting
- Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

##### 6.1.2. For emergency responders
- No additional information available

#### 6.2. Environmental precautions
- Prevent soil and water pollution. Prevent spreading in sewers.

#### 6.3. Methods and material for containment and cleaning up
- **For containment**: Plug the leak, cut off the supply. Dam up the solid spill. Collect spillage. Consult "Material-Handling" to select material of containers.
- **Methods for cleaning up**: Collect the spill only if it is in a dry state. Wetted substance: cover with powdered limestone or dry sand, earth, vermiculite. Scoop solid spill into closing containers. See "Material-Handling" for suitable container materials. Under controlled conditions: neutralize leftovers with dilute acid solution. Possible violent reaction if you neutralize. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

#### 6.4. Reference to other sections
- No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling
- **Additional hazards when processed**: May be corrosive to metals.
- **Precautions for safe handling**: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosion-proof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Avoid contact of substance with water. Observe very strict hygiene - avoid contact. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

#### Hygiene measures
- Wash all exposed body parts thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities
- **Technical measures**: Comply with applicable regulations.
- **Storage conditions**: Keep only in the original container in a cool, well ventilated place away from: direct sunlight, heat sources. Keep container closed when not in use. Keep container closed when not in use.
- **Incompatible products**: Strong bases. Strong acids.
- **Incompatible materials**: Sources of ignition. Direct sunlight.
Kettle Wash Powder
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Maximum storage period: 1 year
Storage temperature: ambient
Heat and ignition sources: KEEP SUBSTANCE AWAY FROM: heat sources.
Storage area: Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Keep locked up. Provide for a tub to collect spills. Keep only in the original container. Meets the legal requirements.
Special rules on packaging: SPECIAL REQUIREMENTS: hermetical. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials: SUITABLE MATERIAL: stainless steel, nickel, polyethylene, polypropylene, glass, stoneware/porcelain. MATERIAL TO AVOID: lead, aluminium, copper, tin, zinc, bronze.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Kettle Wash Powder</th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>2 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>sodium hydroxide (1310-73-2)</th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>2 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Personal protective equipment: Avoid all unnecessary exposure.
Hand protection: Gloves. Wear eye protection, face protection, protective clothing, protective gloves protective gloves.
Skin and body protection: Corrosion-proof clothing. In case of dust production: head/neck protection.
Respiratory protection: Dust production: dust mask with filter type P3. Self-contained breathing apparatus if conc. in air > 2 mg/m³.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline powder.</td>
</tr>
<tr>
<td>Colour</td>
<td>White or off-white</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>12 - 14 %</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>318 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>1390 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 0.1 hPa</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Kettle Wash Powder
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density : 2.1
Density : 2130 kg/m³
Solubility : Exothermically soluble in water. Water: 42 g/100ml
Ethanol: soluble
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : 0.53 mm²/s (25 °C; 1 mol/l)
Viscosity, dynamic : 1.12 mPa.s (25 °C)
Explosive properties : None.
Oxidising properties : None.
Explosive limits : No data available

9.2. Other information
Minimum ignition energy : Not applicable
Saturation concentration : 671 g/m³
VOC content : 0 %
Other properties : Translucent. Hygroscopic. Substance has basic reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts exothermically with water (moisture): release of toxic and corrosive gases/vapours. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). Absorbs the atmospheric CO₂. Violent to explosive reaction with (some) acids. Reacts violently with many compounds: heat release resulting in increased fire or explosion risk.

10.2. Chemical stability
Hygroscopic. Unstable on exposure to air.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid

10.5. Incompatible materials
Strong acids.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Dermal: Harmful in contact with skin.

Kettle Wash Powder
LD50 dermal rabbit : 1350 mg/kg (Rabbit; Literature)
ATE US (dermal) : 1350.000 mg/kg bodyweight

sodium hydroxide (1310-73-2)
LD50 dermal rabbit : 1350 mg/kg (Rabbit; Literature)
ATE US (dermal) : 1350.000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH : 12 - 14 5%

Serious eye damage/irritation : Not classified

pH : 12 - 14 5%

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Symptoms/injuries after inhalation:


Symptoms/injuries after eye contact: Corrosion of the eye tissue. Permanent eye damage.

Symptoms/injuries after ingestion:

On continuous/repeated exposure/contact: Respiratory difficulties. Possible inflammation of the respiratory tract. Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: Classification concerning the environment: not applicable.


| Kettle Wash Powder | LC50 fish 1 | 45.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%)
|                   | EC50 Daphnia 1 | 40.4 mg/l (48 h; Ceriodaphnia sp.; Nominal concentration)
|                   | LC50 fish 2 | 189 mg/l (48 h; Leuciscus idus)
|                   | TLM fish 1 | 99 mg/l (48 h; Lepomis macrochirus)
|                   | TLM fish 2 | 125 ppm (96 h; Gambusia affinis)

| sodium hydroxide (1310-73-2) | LC50 fish 1 | 45.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%)
|                              | EC50 Daphnia 1 | 40.4 mg/l (48 h; Ceriodaphnia sp.; Nominal concentration)
|                              | LC50 fish 2 | 189 mg/l (48 h; Leuciscus idus)
|                              | TLM fish 1 | 99 mg/l (48 h; Lepomis macrochirus)
|                              | TLM fish 2 | 125 ppm (96 h; Gambusia affinis)

12.2. Persistence and degradability

| Kettle Wash Powder | Persistence and degradability | Biodegradability: not applicable. No (test)data on mobility of the substance available.
|                   | Biochemical oxygen demand (BOD) | Not applicable
|                   | Chemical oxygen demand (COD) | Not applicable
|                   | ThOD | Not applicable
|                   | BOD (% of ThOD) | Not applicable

| sodium hydroxide (1310-73-2) | Persistence and degradability | Biodegradability: not applicable. No (test)data on mobility of the substance available.
|                              | Biochemical oxygen demand (BOD) | Not applicable
|                              | Chemical oxygen demand (COD) | Not applicable
|                              | ThOD | Not applicable
|                              | BOD (% of ThOD) | Not applicable

12.3. Bioaccumulative potential

| Kettle Wash Powder | Bioaccumulative potential | Bioaccumulation: not applicable.
|                   | sodium hydroxide (1310-73-2) | Bioaccumulation: not applicable.

| sodium hydroxide (1310-73-2) | Bioaccumulative potential | Bioaccumulation: not applicable.
12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on ozone layer : 
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove for physico-chemical/biological treatment. Do not discharge into surface water.

Additional information : Clean up even minor leaks or spills if possible without unnecessary risk.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Transport document description : UN1823 Sodium hydroxide, solid, 8, II
UN-No.(DOT) : UN1823
Proper Shipping Name (DOT) : Sodium hydroxide, solid
Hazard Classes (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive

Packing group (DOT) : II - Medium Danger
DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21H1, 21H2, 31H1 and 31H2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle.
IP4 - Flexible, fiberboard or wooden IBCs must be silt-proof and water-resistant or be fitted with a silt-proof and water-resistant liner.
T3 - 2.65 178.274(d)(2) Normal............. 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 212
DOT Packaging Bulk (49 CFR 173.xxx) : 240
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 15 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 50 kg
DOT Vessel Stowage Location : A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
**Kettle Wash Powder**

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| DOT Vessel Stowage Other | 52 - Stow “separated from” acids |

**Additional information**

| Other information | No supplementary information available. |

**ADR**

| Transport document description | UN 1823 Sodium hydroxide, solid, 8, II, (E) |
| Packing group (ADR) | II |
| Class (ADR) | 8 - Corrosive substances |
| Hazard identification number (Kemler No.) | 80 |
| Classification code (ADR) | C6 |
| Danger labels (ADR) | 8 - Corrosive substances |

Orange plates

| : 80 1823 |

Tunnel restriction code (ADR)

| : E |

**Transport by sea**

| UN-No. (IMDG) | 1823 |
| Class (IMDG) | 8 - Corrosive substances |
| EmS-No. (1) | F-A |
| EmS-No. (2) | S-B |

**Air transport**

| UN-No. (IATA) | 1823 |
| Class (IATA) | 8 - Corrosives |
| Packing group (IATA) | II - Medium Danger |

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

No additional information available

**15.2. International regulations**

**CANADA**

No additional information available

**EU-Regulations**

No additional information available

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]**

C; R35

Full text of R-phrases: see section 16

**15.2.2. National regulations**

**15.3. US State regulations**

**SECTION 16: Other information**

03/26/2015 EN (English) 8/9
Kettle Wash Powder
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Full text of H-phrases:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal), Category 4</td>
</tr>
<tr>
<td>Met. Corr. 1</td>
<td>Corrosive to metals, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
</tbody>
</table>

NFPA health hazard: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard: 0 - Materials that will not burn.

NFPA reactivity: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

HMIS III Rating
Health: 0 Minimal Hazard - No significant risk to health
Flammability: 0 Minimal Hazard
Physical: 0 Minimal Hazard
Personal Protection: D

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.