



Aqua Chemical Supply, Inc.

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Caustic Soda Beads
Synonyms Anhydrous Sodium Hydroxide; Caustic Soda; NaOH; PELS® Caustic Soda Beads; PELS® Plus Caustic Soda Beads; Sodium Hydroxide
CAS Number 1310-73-2

Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s) Chemical reagent; Industrial uses

Manufacturer/Supplier/Distributor Univar USA Inc., 17425 NE Union Hill Rd., Redmond WA 98052

Emergency telephone number:
For emergency assistance involving chemicals call
CHEMTREC day or night at: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

Health hazards
Acute toxicity (Oral) Category 4
Skin corrosion/irritation Category 1A
Serious eye damage/eye irritation Category 1
Environmental hazards Acute hazards to the aquatic environment / Category 3
Signal word Danger
Hazard statement Corrosive. Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary statement
Prevention Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust or mists. Wear protective gloves/protective clothing/eye protection/face protection.

Response
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.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage Store in a closed container. Keep container tightly closed. Store in a well-ventilated place. Store in a dry place. Store locked up.

Disposal Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Substances | Identifiers | % |
|-----------------------|---------------|-------------|
| Chemical name | | |
| Sodium hydroxide | CAS:1310-73-2 | 96% TO 100% |
| Sodium chloride | CAS:7647-14-5 | 0% TO 2% |
| Sodium carbonate(2:1) | CAS: 497-19-8 | 0% TO 2% |

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

| | |
|--|--|
| General information: | CAUTION! First aid personnel must be aware of own risk during rescue! |
| Ingestion: | Do NOT induce vomiting. Never give liquid to an unconscious person. Get medical attention immediately. |
| Inhalation: | Move to fresh air. If breathing is difficult, give oxygen. Perform artificial respiration if breathing has stopped. Get medical attention immediately. |
| Skin contact: | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. |
| Eye contact: | If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor. |
| Most important symptoms/effects, acute and delayed | |
| Symptoms: | No data available. |
| Indication of immediate medical attention and special treatment needed | |
| Treatment: | All treatments should be based on observed signs and symptoms of distress in the patient. |

5. FIRE FIGHTING MEASURES

| | |
|--|---|
| General fire hazards: | No data available. |
| Suitable (and unsuitable) extinguishing media | |
| Suitable extinguishing media: | SMALL FIRES: Dry chemical or carbon dioxide. LARGE FIRES: Dry chemical, carbon dioxide, alcohol-resistant foam or water spray. |
| Unsuitable extinguishing media: | No data available |
| Specific hazards arising from the chemical: | |
| Containers may explode when heated. | |
| Decomposition products may include the following materials: | carbon oxides; halogenated compounds; metal oxide/oxides. |
| Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear positive pressure self-contained breathing apparatus (SCBA). | |
| SMALL FIRES: | Move containers from fire area if you can do it without risk. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---|--|
| Personal precautions, protective equipment and emergency procedures | |
| Personal Precautions | Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate the area before entry. |
| Emergency Procedures | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Do not get water inside container. |
| Environmental precautions | Prevent entry into waterways, sewers, basements or confined areas. |
| Methods and material for containment and cleaning up | |
| Containment/Clean-up Measures | Avoid generating dust. Carefully shovel or sweep up spilled material and place in suitable container. |

7. HANDLING AND STORAGE

| | |
|-------------------------------|--|
| Precautions for safe handling | |
| Handling | Handle and open container with care. Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Add this product only to water. Never add water to this product. Do not add to warm or hot water, a violent eruption or explosive reaction can result. May cause fire or explosion. Avoid contact with organic materials. Take any precaution to avoid mixing with strong acids. When making solutions or diluting, only add caustic soda slowly to surface of cold water while stirring. Attacks many metals producing extremely flammable hydrogen gas which can |

form explosive mixtures with air. Caustic soda may react with various sugars to generate carbon monoxide. Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed vessels and can cause death. Empty containers retain product residue and can be hazardous. Do not reuse container. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for safe storage, including any incompatibilities

Storage Ventilate enclosed areas. Keep only in the original container. Keep container tightly closed. Keep away from incompatible materials. Store in a cool, dry, well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits/Guidelines

| | | | | | |
|------------------|-----------------|------------------|-----------------|-----------------|-----------------|
| Sodium hydroxide | (1310-73-2) | | | | |
| Result | ACGIH | Canada | Canada Ontario | Canada Quebec | NIOSH |
| | | British Columbia | | | |
| Ceilings | 2 mg/m3 Ceiling | 2 mg/m3 Ceiling | 2 mg/m3 Ceiling | 2 mg/m3 Ceiling | 2 mg/m3 Ceiling |
| | | | TWAs | OSHA | |
| Sodium hydroxide | (1310-73-2) | TWAs | 2 mg/m3 TWA | | |

Engineering Measures/Controls

Good general ventilation 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.

Personal Protective Equipment

Respiratory If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eye/Face Wear chemical splash goggles and face shield.

Skin/Body Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. HANDS: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Environmental Exposure Controls

Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

9. PHYSICAL AND CHEMICAL PROPERTIES

Material Description

| | |
|-----------------------------------|---------------------------------------|
| Physical Form | Solid |
| Appearance/Description | White dustless granules with no odor. |
| Color | White |
| Odor | Odorless |
| Odor Threshold | No data available |
| Boiling Point | 1390 C(2534 F) |
| Melting Point | 310 to 320 C(590 to 608 F) |
| Decomposition Temperature | No data available |
| pH | Strongly basic |
| Specific Gravity/Relative Density | 2.13 Water=1 |
| Water Solubility | 100 % |
| Viscosity | No data available |
| Explosive Properties | No data available |
| Oxidizing Properties: | No data available |
| Volatility | |

| | |
|---------------------------|-------------------|
| Vapor Pressure | No data available |
| Vapor Density | No data available |
| Evaporation Rate | No data available |
| Volatiles (Wt.) | 0 % |
| Flammability | |
| Flash Point | Not relevant |
| UEL | Not relevant |
| LEL | Not relevant |
| Autoignition | No data available |
| Flammability (solid, gas) | No data available |

10. STABILITY AND REACTIVITY

Reactivity Chemical stability

No dangerous reaction known under conditions of normal use.
Stable under recommended storage and handling conditions.

Possibility of hazardous reactions

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

Conditions to avoid

Incompatible materials. Excess heat.

Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, and strong acids. Reactive or incompatible with the following materials: metals (Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.), acids, organic materials (May cause fire or explosion.), food sugars (Caustic soda may react with various sugars to generate carbon monoxide.), water (Aqueous reaction with caustic soda can generate heat (strongly exothermic).

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Components Sodium hydroxide (96% TO 100%)

Irritation: Eye Monkey 1 % 24 Hour(s) Severe irritation; Skin Rabbit 500 mg 24 Hour(s) Severe irritation

Impurities, Stabilizers, Etc....

Sodium carbonate (2:1) (0% TO 2%) 1310- 73-2

Acute Toxicity: Ingestion/Oral Rat LD50 4090 mg/kg; Inhalation Rat LC50 2300 mg/m³ 2 Hour(s); Lungs, Thorax, or Respiration: Dyspnea; Gastrointestinal: Other changes; Irritation: Eye Rabbit 50 mg Severe irritation; Skin Rabbit 500 mg 24 Hour(s) Mild irritation;

Multi-dose Toxicity: Inhalation Rat TCLo 16.2 mg/m³ 16 Week(s)-Intermittent; Sense Organs and Special Senses: Olfaction: Change in sensation of smell; Lungs, Thorax, or Respiration: Emphysema; Immunological Including Allergic: Decrease in cellular immune response

Sodium chloride (0% TO 2%) 7647-14-5

Irritation: Eye Rabbit 100 mg 24 Hour(s) Moderate irritation; Skin Rabbit 500 mg 24 Hour(s) Mild irritation;

Multi-dose Toxicity: Ingestion/Oral Rat TDLo 201.6 g/kg 6 Week(s)-Intermittent;

Vascular: BP elevation not characterized in autonomic section;

Mutagen: Unscheduled DNA synthesis Ingestion/Oral-Rat 16800 mg/kg 4 Week(s)-Continuous; Reproductive: Ingestion/Oral Rat TDLo 56400 mg/kg (5D pre-21D post); Reproductive Effects: Maternal Effects:

Postpartum; Reproductive Effects :Effects on Newborn: Biochemical and metabolic

GHS Properties

Classification

Acute toxicity EU/CLP • Classification criteria not met

OSHA HCS 2012 • Classification criteria not met

UN GHS • Classification criteria not met

Aspiration Hazard EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

Carcinogenicity EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

Germ Cell Mutagenicity EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

Skin corrosion/Irritation EU/CLP • Skin Corrosion 1A
 OSHA HCS 2012 • Skin Corrosion 1B
 UN GHS • Skin Corrosion 1B

Skin sensitization EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

STOT-RE EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

STOT-SE EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

Toxicity for Reproduction EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

Respiratory sensitization EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Classification criteria not met
 UN GHS • Classification criteria not met

Serious eye damage/Irritation EU/CLP • Classification criteria not met
 OSHA HCS 2012 • Serious Eye Damage 1
 UN GHS • Serious Eye Damage 1

Route(s) of entry/exposure Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

Acute (Immediate) May cause corrosive burns - irreversible damage.

Chronic (Delayed) Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation
 with chronic cough.

Skin

Acute (Immediate) Causes severe skin burns.

Chronic (Delayed) Repeated or prolonged exposure to corrosive materials will cause dermatitis.

Eye

Acute (Immediate) Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness.

Chronic (Delayed) Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.

Ingestion
Acute (Immediate) May cause irreversible damage to mucous membranes.

Chronic (Delayed) Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances.

Key to abbreviations

LD = Lethal Dose TC = Toxic Concentration MLD = Mild TD = Toxic Dose SEV = Severe

12. ECOLOGICAL INFORMATION

| Dosage | Species | Duration | Result | Exposure Conditions | Comments |
|---|-----------------------------------|------------|--------|---------------------|----------|
| = 40.4 mg/L 33000 to 100000 µg/L | Water Flea: Ceriodaphnia dubia | 48 Hour(s) | EC50 | Fresh water | NDA |
| | Crustacea: Crangon - adult | 48 Hour(s) | LC50 | Marine water | NDA |
| = 125000 µg/L = 56 mg/L = 196 mg/L = 56 mg/L | Fish: Gambusia affinis - Adult | 96 Hour(s) | LC50 | Fresh water | NDA |
| | Fish: Poecilia reticulata - Young | 96 Hour(s) | NOEC | Marine water | NDA |
| | Fish: Guppy - Poecilia reticulata | 96 Hour(s) | LC50 | Marine water | NDA |
| | Fish: Guppy - Poecilia reticulata | 96 Hour(s) | NOEC | Marine water | NDA |

Persistence and degradability Material data lacking.

Bioaccumulative potential Material data lacking.

Mobility in Soil
Water solubility: Soluble.

Results of PBT and vPvB assessment No PBT and vPvB assessment has been conducted.

Other adverse effects No studies have been found

13. DISPOSAL CONSIDERATION

Product waste Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

14. TRANSPORT INFORMATION

| | UN number | UN proper shipping name | Transport hazard class(es) | Packing group | Environmental hazards |
|-----------|-----------|-------------------------|----------------------------|---------------|-----------------------|
| DOT | UN1823 | Sodium hydroxide, solid | 8 | II | NDA |
| TDG | UN1823 | SODIUM HYDROXIDE, SOLID | 8 | II | NDA |
| IMO/IMDG | UN1823 | SODIUM HYDROXIDE, SOLID | 8 | II | NDA |
| IATA/ICAO | UN1823 | Sodium hydroxide, solid | 8 | II | NDA |

Special precautions for user None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Data lacking.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications Acute

| Component | CAS | Canada DSL | Canada NDSL | EU EINECS | EU ELNICS | TSCA |
|-----------------------|-----------|------------|-------------|-----------|-----------|------|
| Sodium carbonate(2:1) | 497-19-8 | Yes | No | Yes | No | Yes |
| Sodium chloride | 7647-14-5 | Yes | No | Yes | No | Yes |
| Sodium hydroxide | 1310-73-2 | Yes | No | Yes | No | Yes |

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Sodium hydroxide 1310-73-2 Not Listed

- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- Sodium hydroxide 1310-73-2 1000 lb fin RQ
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - California - Proposition 65 - Carcinogens List

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed

- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

- Sodium hydroxide 1310-73-2 Not Listed
- Sodium chloride 7647-14-5 Not Listed
- Sodium carbonate (2:1) 497-19-8 Not Listed

Chemical Safety Assessment No Chemical Safety Assessment has been carried out.

Other Information WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION



Label Elements

Hazard symbol

Relevant Phrases (code & full text)

H319 - Causes serious eye irritation

R36 - Irritating to eyes

Notice

Aqua Chemical Supply, Inc. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Aqua Chemical Supply, Inc. sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Aqua Chemical Supply, Inc. makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Aqua Chemical Supply, Inc.'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

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