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SAFETY DATA SHEET

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Revision number 1.1

1. Identification

Product identifier

Product name Caustic Soda Beads

Other means of identification

Synonyms Anhydrous Sodium Hydroxide; Caustic Soda; NaOH; PELS® Caustic Soda Beads; PELS® Plus Caustic Soda Beads; Sodium Hydroxide

Recommended use of the chemical and restrictions on use

Recommended use Chemical reagent ; For industrial use only

Restrictions on use No information available

Details of the supplier of the safety data sheet

Manufacturer address

Axiell, LLC
Westlake Vinyls, Inc.
Westlake Vinyls Company LP
2801 Post Oak Blvd. Suite 600
Houston, TX 77056 United States
www.westlake.com
SDSinfo@westlake.com
Company Phone: 713-960-9111

Emergency telephone number

24 hour emergency phone number +1 304-455-6882

Emergency telephone Chemtrec (Mexico): 01-800-681-9531

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 5 - (H303)
Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

Label elements

Danger

Hazard statements

H303 - May be harmful if swallowed

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

P310 - Immediately call a POISON CENTER or doctor

P321 - Specific treatment (see supplemental first aid instructions on this label)

Eyes

P310 - Immediately call a POISON CENTER or doctor

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Skin

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]

P363 - Wash contaminated clothing before reuse

Inhalation

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor

Ingestion

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other information

Harmful to aquatic life

According to: NOM-018-STPS-2015 this product is considered hazardous

3. Composition/information on ingredients

Substance**Synonyms**

Anhydrous Sodium Hydroxide; Caustic Soda; NaOH; PELS® Caustic Soda Beads; PELS® Plus Caustic Soda Beads; Sodium Hydroxide.

Chemical name	CAS No	Weight-%
Sodium hydroxide	1310-73-2	96-100
Sodium chloride	7647-14-5	0-2
Sodium carbonate (2:1)	497-19-8	1

Mixture

Not applicable

4. First-aid measures**Description of first aid measures**

General advice	If immediate medical attention is required, show this safety data sheet to the doctor in attendance.
Inhalation	Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give artificial respiration if victim is not breathing. Move victim to fresh air.
Eye contact	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing and shoes.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Obtain medical attention immediately if ingested.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. Fire-fighting measures**Suitable extinguishing media**

Small fire Dry chemical or CO₂.

Large fire Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Unsuitable extinguishing media No data available.

Specific hazards arising from the chemical. Containers may explode when heated. Depending on conditions, decomposition products may include the following materials: carbon oxides; halogenated compounds; metal oxide/oxides.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective actions for fire-fighters 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 touch or 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 containers.

Other information Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 – Disposal Considerations.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Avoid generation of dust.

Methods for cleaning up Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle and open container with care. Use only with adequate ventilation. Wear appropriate personal protective clothing to prevent skin contact. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. When diluting, always add the product to water. Never add water to the product. May cause fire or explosion. Avoid contact with organic materials. Do not add to warm or hot water, a violent eruption or explosive reaction can result. 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 hands before eating, drinking or smoking.

Conditions for safe storage, including any incompatibilities

Storage conditions Ventilate enclosed areas. Keep container tightly closed. Keep only in the original container.

Store in a cool, dry, well-ventilated area away from incompatible materials.

8. Exposure controls/personal protection

Control parameters

Exposure limits NOM-010-STPS-2014.

Chemical name	TWA	STEL	Ceiling Limit Value
Sodium hydroxide 1310-73-2	-	-	2 mg/m ³

Appropriate engineering controls

Engineering 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.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear chemical splash goggles and face shield.

Hand protection 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.

Skin and body protection 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.

Respiratory protection 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.

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.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid
Appearance	White granules
Color	White

Odor Odorless
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	Strongly basic
Melting point / freezing point	310 - 320 / 590 - 608 °F	
Boiling point / boiling range	1390 °C / 2534 °F	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	2.13	
Water solubility	100%	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Oxidizing properties	No information available	
Explosive properties	No information available	
Molecular weight	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. Stability and reactivity

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	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. Excessive heat.
Incompatible materials	Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, 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	Depending on conditions, decomposition products may include the following materials: carbon oxides; halogenated compounds; metal oxide/oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Acute effects. May cause corrosive burns - irreversible damage. Chronic effects. Repeated

or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough.

- Eye contact** Acute effects. Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness. Chronic effects. Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.
- Skin contact** Acute effects. Causes severe burns. Chronic effects. Repeated or prolonged exposure to corrosive materials will cause dermatitis.
- Ingestion** Acute effects. May cause irreversible damage to mucous membranes. Chronic effects. Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

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

- ATEmix (oral) 3,461.20 mg/kg
- ATEmix (dermal) 10,010.00 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium chloride 7647-14-5	= 3 g/kg (Rat)	> 10 g/kg (Rabbit)	> 42 g/m ³ (Rat) 1 h
Sodium carbonate (2:1) 497-19-8	= 4090 mg/kg (Rat)	-	-

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

- Skin corrosion/irritation** May cause skin irritation.
- Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes severe burns. Risk of serious damage to eyes.
- Respiratory or skin sensitization** No information available.
- Germ cell mutagenicity** No information available.
- Carcinogenicity** No information available.
- Reproductive toxicity** No information available.
- STOT - single exposure** No information available.
- STOT - repeated exposure** No information available.
- Aspiration hazard** No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hydroxide 1310-73-2	-	LC50: =45.4mg/L (96h, Oncorhynchus mykiss)	-	-
Sodium chloride 7647-14-5	-	LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: =7050mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss)	-	EC50: =1000mg/L (48h, Daphnia magna) EC50: 340.7 - 469.2mg/L (48h, Daphnia magna)
Sodium carbonate (2:1) 497-19-8	EC50: =242mg/L (120h, Nitzschia)	LC50: =300mg/L (96h, Lepomis macrochirus) LC50: 310 - 1220mg/L (96h, Pimephales promelas)	-	EC50: =265mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation No information available.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

14. Transport information

MEX

UN/ID no UN1823
 Proper shipping name SODIUM HYDROXIDE, SOLID
 Hazard class 8
 Packing group II
 Description UN1823, SODIUM HYDROXIDE, SOLID, 8, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

TDG

UN/ID no	UN1823
Proper shipping name	SODIUM HYDROXIDE, SOLID
Hazard class	8
Packing group	II
Description	UN1823, SODIUM HYDROXIDE, SOLID, 8, II

DOT

UN/ID no	UN1823
Proper shipping name	Sodium hydroxide, solid
Hazard class	8
Packing group	II
Reportable Quantity (RQ)	Sodium hydroxide: RQ (lb)= 1020.00
Special Provisions	IB8, IP2, IP4, T3, TP33
Description	UN1823, Sodium hydroxide, solid, 8, II

IMDG / IMO

UN number	UN1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
EmS-No	F-A, S-B
Description	UN1823, SODIUM HYDROXIDE, SOLID, 8, II

IATA / ICAO

UN number	UN1823
UN proper shipping name	Sodium hydroxide, solid
Transport hazard class(es)	8
Packing group	II
Description	UN1823, Sodium hydroxide, solid, 8, II

15. Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 RTECS (Registry of Toxic Effects of Chemical Substances)
 World Health Organization

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Revision Note No information available.

Disclaimer

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

End of Safety Data Sheet