SAFETY DATA SHEET
SODIUM HYDROXIDE PEARL LRG

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

1.1. Product identifier
Product name: SODIUM HYDROXIDE PEARL LRG
Product number: 1561
Synonyms; trade names: Caustic Soda, Lye
REACH registration number: 01-2119457892-27-XXXX
CAS number: 1310-73-2
EU index number: 011-002-00-6
EC number: 215-185-5

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory reagent. For use in industrial installations or professional treatment only.
Uses advised against: No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet
Supplier: Reagent Chemical Services
18 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk

1.4. Emergency telephone number
Emergency telephone: OHES Environmental Ltd 24-7
Tel. 0333 333 9939 (24 hour)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Health hazards: Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards: Not Classified

2.2. Label elements
EC number: 215-185-5
SODIUM HYDROXIDE PEARL LRG

Pictogram

Signal word Danger

Hazard statements H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statements P260 Do not breathe vapour/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
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 POISON CENTER/ doctor.
P314 Get medical advice/ attention if you feel unwell.
P501 Dispose of contents / container to hazardous waste depot.

Supplementary precautionary statements P234 Keep only in original container.
P264 Wash contaminated skin thoroughly after handling.
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.
P321 Specific treatment (see medical advice on this label).
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P405 Store locked up.
P406 Store in corrosive resistant/… container with a resistant inner liner.

2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances
Product name SODIUM HYDROXIDE PEARL LRG
REACH registration number 01-2119457892-27-XXXX
EU index number 011-002-00-6
CAS number 1310-73-2
EC number 215-185-5

SECTION 4: First aid measures

4.1. Description of first aid measures
General information Immediate first aid is imperative. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if symptoms are severe or persist.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.
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Skin contact
Immediately remove contaminated clothing. Rinse immediately with plenty of water. Get medical attention immediately.

Eye contact
Rinse with water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

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

General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
Acute: Coughing. Irritation of the respiratory system. Delayed: Prolonged or repeated exposure to dusts may cause burns to the respiratory system with the possibility of lung edema.

Ingestion
Acute: Burns in the mouth, throat, stomach and gastrointestinal tract. Risk of perforation. Delayed: Scarring of the digestive system with possible blockages due to internal damage. Coma and death can occur following severe exposure.

Skin contact
Acute: Chemical burns. Delayed: Scarring of the skin.

Eye contact
Acute: Severe burns. Delayed: Permanent eye damage. Possible blindness.

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

Notes for the doctor
Have eye wash facilities in place close to the operators' work area to provide immediate first aid prior to medical attention. All cases of exposure require immediate medical attention.

Specific treatments
No specific chemical antidote is known to be required after exposure to this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Use alcohol-resistant foam, carbon dioxide or dry powder to extinguish.

Unsuitable extinguishing media
Do not use water, if avoidable.

5.2. Special hazards arising from the substance or mixture

Specific hazards
The product is non-combustible.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Hydrogen. Oxides of the following substances: Sodium.

5.3. Advice for firefighters

Protective actions during firefighting
Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Fight fire from safe distance or protected location. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters
Wear chemical protective suit. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust and contact with skin and eyes. Wash thoroughly after dealing with a spillage.
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For emergency responders

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions

Do not discharge into drains or watercourses or onto the ground. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Do not touch or walk into spilled material. Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Do not breathe dust. Wash hands thoroughly after handling.

Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Provide eyewash station. Wash hands thoroughly after handling. Contaminated clothing should be placed in a closed container for disposal or decontamination. Warn cleaning personnel of any hazardous properties of the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in tightly-closed, original container in a dry and cool place. Protect containers from damage.

Storage class

Corrosive storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Short-term exposure limit (15-minute): WEL  2 mg/m³

WEL = Workplace Exposure Limit

DNEL

Workers - Inhalation; Long term local effects: 1 mg/m³

General population - Inhalation; Long term local effects: 1 mg/m³

8.2. Exposure controls

Protective equipment

Appropriate engineering controls

Provide adequate general and local exhaust ventilation.
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Eye/face protection
Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374. The breakthrough time for any glove material may be different for different glove manufacturers. For exposure up to 8 hours, wear gloves made of the following material: Neoprene. Butyl rubber. Viton rubber (fluoro rubber). Thickness: ~ 0.45 mm

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures
Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Contaminated clothing should be placed in a closed container for disposal or decontamination.

Respiratory protection
If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Particulate filter, type P2. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Check that the respirator fits tightly and the filter is changed regularly.

Environmental exposure controls
Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
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<tr>
<td>Odour threshold</td>
<td>No specific test data are available.</td>
</tr>
<tr>
<td>pH</td>
<td>pH (diluted solution): 14.5 5%</td>
</tr>
<tr>
<td>Melting point</td>
<td>318°C</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>1390°C @ 760 mm Hg</td>
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<tr>
<td>Flash point</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No specific test data are available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Technically not feasible.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>1 mbar @ 700°C</td>
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<tr>
<td>Vapour density</td>
<td>Scientifically unjustified.</td>
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<tr>
<td>Relative density</td>
<td>No specific test data are available.</td>
</tr>
<tr>
<td>Bulk density</td>
<td>~ 2130.0 kg/m³</td>
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<tr>
<td>Solubility(ies)</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No specific test data are available.</td>
</tr>
</tbody>
</table>
SODIUM HYDROXIDE PEARL LRG

Auto-ignition temperature
No specific test data are available.

Decomposition Temperature
No specific test data are available.

Viscosity
Technically not feasible.

Explosive properties
Not considered to be explosive.

Explosive under the influence of a flame
Not considered to be explosive.

Oxidising properties
Does not meet the criteria for classification as oxidising.

9.2. Other information

Particle size
No specific test data are available.

Molecular weight
40

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
The following materials may react violently with the product: Strong acids. Powdered metal. Strong oxidising agents.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Reacts strongly with water. Reacts violently with strong acids.

10.4. Conditions to avoid
Conditions to avoid
Avoid contact with acids. Avoid contact with strong oxidising agents. Never add water directly to this product as it may cause a vigorous reaction or boiling. Reacts strongly with water.

10.5. Incompatible materials
Materials to avoid
Avoid contact with the following materials: Strong acids. Strong alkalis. Alkaline earth metals. Strong oxidising agents.

10.6. Hazardous decomposition products
Hazardous decomposition products
Oxides of the following substances: Sodium. Hydrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological effects
Causes severe skin burns and eye damage.

Acute toxicity - oral
Notes (oral LD₅₀)
LD₅₀ 325 mg/kg, Oral, Rabbit REACH dossier information.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Conclusive data but not sufficient for classification. REACH dossier information.

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
750 µg/L, Inhalation, Rat REACH dossier information.

Skin corrosion/irritation
Skin corrosion/irritation
Corrosive to skin.
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**Serious eye damage/irritation**
Corrosivity to eyes is assumed. REACH dossier information.

**Respiratory sensitisation**
Based on available data the classification criteria are not met.

**Skin sensitisation**
Based on available data the classification criteria are not met.

**Germ cell mutagenicity**
This substance has no evidence of mutagenic properties.

**Genotoxicity - in vitro**
This substance has no evidence of mutagenic properties.

**Carcinogenicity**
There is no evidence that the product can cause cancer.

**Reproductive toxicity**
Does not contain any substances known to be toxic to reproduction.

**Specific target organ toxicity - single exposure**
STOT - single exposure
Based on available data the classification criteria are not met.

**Specific target organ toxicity - repeated exposure**
STOT - repeated exposure
Based on available data the classification criteria are not met.

**Aspiration hazard**
Not anticipated to present an aspiration hazard, based on chemical structure.

**Inhalation**
May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Burns can occur.

**Ingestion**
This product is strongly corrosive. May cause chemical burns in mouth, oesophagus and stomach.

**Skin contact**
This product is corrosive. Causes severe burns.

**Eye contact**
Causes severe burns. Causes serious eye damage. Immediate first aid is imperative.

**Acute and chronic health hazards**
This product is corrosive.

**Route of entry**
Skin and/or eye contact Ingestion

**Target organs**
Skin Eyes Respiratory system, lungs Gastro-intestinal tract

**Medical symptoms**
Chemical burns.

### SECTION 12: Ecological Information

**Ecotoxicity**
The ecotoxicity of this substance has been assessed during REACH registration

**12.1. Toxicity**

**Acute toxicity - fish**
$LC_{50}$, 96 hours: 45.4 mg/l, *Onchorhynchus mykiss* (Rainbow trout)
Supplier's information.

**Acute toxicity - aquatic invertebrates**
$EC_{50}$, 48 hours: 40.4 mg/l,
SODIUM HYDROXIDE PEARL LRG

Short term toxicity - embryo and sac fry stages  Not available.

12.2. Persistence and degradability
Persistence and degradability  The product contains inorganic substances which are not biodegradable.
Stability (hydrolysis)  Scientifically unjustified.
Biological oxygen demand  No information available.
Chemical oxygen demand  No information available.

12.3. Bioaccumulative potential
Bioaccumulative potential  Bioaccumulation is unlikely.
Partition coefficient  No specific test data are available.

12.4. Mobility in soil
Mobility  The product is water-soluble and may spread in water systems.
Adsorption/desorption coefficient  Scientifically unjustified.

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment  This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects
Other adverse effects  None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
General information  The generation of waste should be minimised or avoided wherever possible. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents.
Disposal methods  Dispose of waste product or used containers in accordance with local regulations

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID)  1823
UN No. (IMDG)  1823
UN No. (ICAO)  1823
UN No. (ADN)  1823

14.2. UN proper shipping name
Proper shipping name (ADR/RID)  SODIUM HYDROXIDE, SOLID
Proper shipping name (IMDG)  SODIUM HYDROXIDE, SOLID
Proper shipping name (ICAO)  SODIUM HYDROXIDE, SOLID
Proper shipping name (ADN)  SODIUM HYDROXIDE, SOLID

14.3. Transport hazard class(es)
SODIUM HYDROXIDE PEARL LRG

ADR/RID class 8
ADR/RID classification code C6
ADR/RID label 8
IMDG class 8
ICAO class/division 8
ADN class 8

Transport labels

14.4. Packing group
ADR/RID packing group II
IMDG packing group II
ADN packing group II
ICAO packing group II

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user
IMDG Code segregation group 18. Alkalis
EmS F-A, S-B
ADR transport category 2
Hazard Identification Number (ADR/RID) 80
Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Health and Safety at Work etc. Act 1974 (as amended).
SODIUM HYDROXIDE PEARL LRG

EU legislation

Guidance
Workplace Exposure Limits EH40.

Authorisations (Title VII Regulation 1907/2006)
No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006)
No specific restrictions on use are known for this product.

15.2. Chemical safety assessment
A chemical safety assessment has been carried out.

Inventories
EU - EINECS/ELINCS
All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet
ATE: Acute Toxicity Estimate.
DNEL: Derived No Effect Level.
DMEL: Derived Minimal Effect Level.
PNEC: Predicted No Effect Concentration.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

Classification abbreviations and acronyms
Eye Dam. = Serious eye damage
Skin Corr. = Skin corrosion
Met. Corr. = Corrosive to metals

General information
Only trained personnel should use this material.

Key literature references and sources for data

Classification procedures according to Regulation (EC) 1272/2008

Revision date 11/11/2017
Revision 3
Supersedes date 07/12/2012
SDS number 20465
SDS status Approved.
Hazard statements in full

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.