



# CONSOLIDATED CHEMICAL CO.

## Material Safety Data Sheet

CS: 1.4.21

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Infosafe No™ 7C036 Issue Date :March 2008 -ISSUED by CONSCHEM CS: 1.4.21

Product Name **Caustic soda - Pearl, Prills, and Flake**

Classified as hazardous according to criteria of NOHSC

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

<b>Product Name</b>	Caustic soda - Pearl, Prills, and Flake		
<b>Product Use</b>	General chemical.		
<b>Company Name</b>	CONSOLIDATED CHEMICAL CO (ABN 34 527 060 773)		
<b>Address</b>	52-62 WATERVIEW CLOSE DANDENONG SOUTH VICTORIA 3175		
<b>Telephone</b>	Tel: 03/9799 7555		
<b>Number/Fax</b>	Fax: 03/9799 7666		
<b>Other Names</b>	<u>Name</u>	<u>Product Code</u>	
	CAUSTIC SODA	261, 2586	
	Sodium hydroxide		
	Soda lye		

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical</b>	Solid				
<b>Characterization</b>					
<b>Ingredients</b>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	CAUSTIC SODA	1310-73-2	100 %		
	FLAKE				

### 3. HAZARDS IDENTIFICATION

Very hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant, corrosive), of ingestion, of inhalation. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or occasionally, blistering.

**Chronic Effects** The substance may be toxic to mucous membranes, upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

**Inhalation** Inhalation of dust or mists of the solution will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema.

**Ingestion** Ingestion can result in pain, nausea, vomiting, swelling of larynx and subsequent suffocation, perforation of the gastrointestinal tract, cardiovascular collapse and coma.

**Skin** Corrosive to skin - may cause skin burns. Skin contact often does not cause pain, thus care should be taken to avoid contamination of gloves and boots. Irritant dermatitis may result from working with the material.

**Eye** Corrosive to eyes; contact can cause conjunctivitis, corneal burns and ulceration, which can result in permanent injury and possible loss of sight.

### 4. FIRST AID MEASURES

**Inhalation** Remove the source of contamination or move the victim to fresh air. Ensure airways are clear and have qualified person give oxygen through a face mask if breathing is difficult. If symptoms develop seek medical attention.



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<b>Ingestion</b>	Immediately rinse mouth with water. Give water to drink. DO NOT INDUCE vomiting. Seek immediate medical assistance Note: Never give an unconscious person anything to drink
<b>Skin</b>	Immediately remove contaminated clothing and wash affected area with soap and water. Ensure contaminated clothing is washed before re-use. If irritation persists seek immediate medical attention.
<b>Eye</b>	Rinse immediately with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical advice. Contact lenses should only be removed by Experienced Personnel.
<b>First Aid Facilities</b>	An eye wash fountain, safety shower and a general washing facility should be available immediately adjacent to the work area.
<b>Advice to Doctor</b>	Treat symptomatically and as for strongly alkaline corrosive material.

### 5. FIRE FIGHTING MEASURES

<b>Specific Hazards</b>	As in any fire, wear an approved self-contained breathing apparatus in pressure-demand, and full protective gear. Sodium hydroxide + zinc metal dust causes ignition of the latter. Under proper conditions of temperature, pressure and state of division, it can ignite or react violently with acetaldehyde, allyl chloride, benzene-1,4-diol, chlorine trifluoride, 1,2 dichlorethylene, nitroethane, nitromethane, nitroparaffins, nitropropane, cinnamaldehyde, 2,2-dichloro-3,m3-dimethylbutane. Sodium hydroxide in contact with water may generate enough heat to ignite adjacent combustible materials. Phosphorous boiled with NaOH yields mixed phosphines with may ignite spontaneously in air. Sodium hydroxide and cinnamaldehyde + heat may cause ignition. Reaction with certain metals releases flammable and explosive hydrogen gas. SPECIAL REMARKS ON EXPLOSION HAZARDS: Sodium hydroxide reacts to form explosive products with ammonia + silver nitrate. Benzene extract of allyl benzenesulphonate prepared from allyl alcohol, and benzene sulphonyl chloride in presence of aqueous sodium hydroxide, under vacuum distillation, residue darkened and exploded. Sodium hydroxide + impure tetrahydrofuran, which can contain peroxides, can cause serious explosions. Dry mixtures of sodium hydroxide and sodium tetrahydroborate liberate hydrogen explosively at 230-270°C. Sodium hydroxide reacts with sodium salt of trichlorophenol + methyl alcohol + trichlorobenzene + heat to cause an explosion. Sodium hydroxide reacts
<b>Flash Point</b>	Not combustible
<b>Flammability</b>	Non combustible material.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Spills &amp; Disposal</b>	SPILLS: Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination. Sweep up, but avoid generating dust. Collect and seal in drums for disposal. Wash area down with large quantity of water. Caution - heat will be evolved. DISPOSAL: Refer to State Land Waste Management Authority. Empty containers must be decontaminated. Can be dissolved carefully in water and greatly diluted or carefully neutralised with dilute acid and flushed to drain with copious amounts of water. Alternatively, normally suitable for disposal at approved land waste site.
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### 7. HANDLING AND STORAGE

<b>Handling</b>	Keep container dry. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing
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Product Name **Caustic soda - Pearl, Prills, and Flake**

Classified as hazardous according to criteria of NOHSC

**Storage** agents, reducing agents, metals, acids, alkalis, moisture.  
 CORRECT SHIPPING NAME: Sodium hydroxide solid. UN NO: 1823 PACKAGING GROUP: 2  
 Classified as an 8 (CORROSIVE) Dangerous Substance for the purpose of transport. Refer to relevant regulations for storage and transport requirements. Not to be loaded with dangerous when wet substances (class 4.2), oxidising agents (class 5) or foodstuffs. This material is a Scheduled Poison (S6) and must be stored, maintained and used in accordance with the relevant regulations. Keep containers closed at all times. Store away from acids. Do not store in aluminium or galvanised containers. Keep dry. Reacts exothermically with water. Heat evolved may cause boiling and spattering. Check regularly for spills and leaks.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	CAUSTIC SODA FLAKE			2		
<b>Other Exposure Information</b>	EXPOSURE STANDARD (TWA): 2 mg/m3 'Peak Limitation' As published by the National Occupational Health and Safety Commission (Worksafe Australia). Exposure Standards (TWA) is the time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers. Peak Limitation - a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.					
<b>Personal Protective Equipment</b>	OVERALLS, BOOTS, FACE SHIELD OR AIR MASK, GLOVES, APRON. Avoid all contact. Wear overalls, full face shield, elbow-length impervious gloves, splash apron and rubber boots. Leather is attacked by caustic. Use with adequate ventilation. Avoid generating and inhaling dusts, mists and aerosols. If inhalation risk exists wear air-supplied mask. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and protective equipment before storing or reusing.					
<b>Eng. Controls</b>	A system of local and/or general exhaust is recommended to keep employee exposure below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.					
<b>Hygiene Measures</b>	Wash hands before eating, drinking or smoking.					

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	White deliquescent strongly alkaline solid in various forms - e.g. pellets, beads, grains, flakes, lumps or powder. Soluble in water, alcohol, and glycerol.
<b>Melting Point</b>	310.0°C
<b>Boiling Point</b>	1390.0°C
<b>Specific Gravity (H2O=1)</b>	2.13 (25°C)
<b>pH Value</b>	(1% aqueous solution): 12.7
<b>Vapour Pressure</b>	@ 739C : 0.13 kPa



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**Flash Point** Not combustible  
**Flammability** Non combustible material.

### 10. STABILITY AND REACTIVITY

**Stability** This product is stable.  
**Hazardous Polymerization** Will not occur.  
**Materials to Avoid** Highly reactive with metals.  
**Hazardous Reaction** Reactive with oxidizing agents, reducing agents, acids, alkalis, moisture. Vigorous exothermic reaction with water. In the presence of moisture it is corrosive to aluminium, zinc and tin and produces hydrogen gas. Reacts violently with acids. Reacts with ammonium salts evolving ammonia gas. Absorbs water and carbon dioxide from the air. Vigorous exothermic reaction with water which can lead to boiling and spattering.  
**Conditions to Avoid** Incompatible materials, moisture, moist air.

### 11. TOXICOLOGICAL INFORMATION

**Toxicology Information** Intraperitoneal LD50 (mouse): 40 mg/kg Oral Lowest Lethal Dose (rabbit): 500 mg/kg SKIN: Corrosive EYES: Corrosive. Permanent damage may occur. Highly corrosive to any tissue with which it comes into contact. Produces burns, deep ulceration and gelatinous necrotic areas at the site of contact. Low systemic toxicity.  
**Inhalation** Inhalation of dust or mists of the solution will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema.  
**Ingestion** Ingestion can result in pain, nausea, vomiting, swelling of larynx and subsequent suffocation, perforation of the gastrointestinal tract, cardiovascular collapse and coma.  
**Skin** Corrosive to skin - may cause skin burns. Skin contact often does not cause pain, thus care should be taken to avoid contamination of gloves and boots. Irritant dermatitis may result from working with the material.  
**Eye** Corrosive to eyes; contact can cause conjunctivitis, corneal burns and ulceration, which can result in permanent injury and possible loss of sight.  
**Chronic Effects** The substance may be toxic to mucous membranes, upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

### 12. ECOLOGICAL INFORMATION

**Persistence / Degradability** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  
The product itself and its products of degradation are not toxic.

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal** In accordance with local state and federal Waste Management Authority regulations.

### 14. TRANSPORT INFORMATION

**U.N. Number** Class 8: Corrosive materials. UN NO: 1823, PG: II  
1823



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**Proper Shipping Name** SODIUM HYDROXIDE, SOLID  
**DG Class** 8  
**Hazchem Code** 2X  
**Packaging Method** 3.8.8  
**Packing Group** II  
**EPG Number** 8A1  
**IERG Number** 37

### 15. REGULATORY INFORMATION

**Risk Phrase** R35 Causes severe burns.  
R36/38 Irritating to eyes and skin.  
R41 Risk of serious damage to eyes.

**Safety Phrase** S2 Keep out of reach of children.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S37/39 Wear suitable gloves and eye/face protection.  
S45 In case of accident or if you feel unwell seek medical advice immediately

**Poisons Schedule** S6

**Hazard Category** Corrosive

### 16. OTHER INFORMATION

**Contact Person/Point** Mr. David Broberg  
Technical Regulations Manager  
TELEPHONE (03) 9799.7555  
Any Advice, recommendation, information, assistance, or service provided by Consolidated Chemical Co., in relation to the goods supplied by it or their use or application is given in good faith and believed to be appropriate and reliable. However, it is provided with a disclaimer for any liability or responsibility on the part of Consolidated Chemical Co. The customer accepts all risk and responsibility for use of the goods alone, or in combination with other products. All warranties, guarantees and conditions, other than those expressly stated, and whether implied by statute, common law, custom of the trade or otherwise, are to the extent that the law permits, expressly excluded.

**Empirical Formula & Structural Formula** Na-O-H

**Poisons Schedule** S6

**Hazard Category** Corrosive

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