

Safety Data Sheet

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

Revision date: 12/16/2014 Version: 1.0

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

Product identifier

Product form : Substance

Trade name : SODIUM HYDROXIDE, PELLETS

CAS No 1310-73-2 Product code : AB01916 Formula : NaOH

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

Use of the substance/mixture : Laboratory use/Manufacturing component/Research

: Industrial use Use of the substance/mixture

Details of the supplier of the safety data sheet

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1.4. **Emergency telephone number**

Emergency number : 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Dermal) H312 Skin Corr. 1A H314

Label elements 2.2.

GHS-US labeling

Hazard pictograms (GHS-US)





GHS05

GHS07

Signal word (GHS-US)

Hazard statements (GHS-US) : H312 - Harmful in contact with skin

H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US) P260 - Do not breathe dust

P264 - Wash hands, forearms and face thoroughly after handling P280 - Wear eye protection, protective clothing, protective gloves

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

P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated

clothing. Rinse skin with water/shower

P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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 POISON CENTER or doctor/physician P312 - Call a POISON CENTER/doctor/physician if you feel unwell

P321 - Specific treatment (see SECTION 4 on this label)

P362+P364 - Take off contaminated clothing and wash it before reuse

P363 - Wash contaminated clothing before reuse

P405 - Store locked up

P501 - Dispose of contents/container to Local/Federal regulations

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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
SODIUM HYDROXIDE, PELLETS (Main constituent)	(CAS No) 1310-73-2	100	Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1.	Description	of first	aid	measures

First-aid measures general	First-aid	measures	general
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: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact

Wipe off dry product from skin. Remove clothing before washing. Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. 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. Immediately call a POISON CENTER or doctor/physician. Specific measures (see Consult a doctor/medical service on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

First-aid measures after eye contact

: Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

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 consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries

: Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation

: WHEN PROCESSED: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. ON CONTINUOUS EXPOSURE/CONTACT: Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible laryngeal spasm/oedema. Risk of lung oedema.

Symptoms/injuries after skin contact

Blisters. Caustic burns/corrosion of the skin. Slow-healing wounds. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.

Symptoms/injuries after eye contact

: Corrosion of the eye tissue. Permanent eye damage.

Symptoms/injuries after ingestion

 Dry/sore throat. Nausea. Abdominal pain. Blood in vomit. Difficulty in swallowing. Possible esophageal perforation. Burns to the gastric/intestinal mucosa. Bleeding of the gastrointestinal tract. Shock.

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

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SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media : EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adapt extinguishing media to the

environment. Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium. 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 : Violent exothermic reaction with water (moisture): release of corrosive mist. Reacts

exothermically on exposure to water (moisture) with combustible materials: risk of spontaneous ignition. 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. Thermal decomposition generates: Corrosive vapors.

5.3. Advice for firefighters

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. When cooling/extinguishing: no

water in the substance. 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. Avoid (reject) fire-fighting water to enter 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

Protective equipment : Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen

apparatus. Contact with moisture/water: compressed air/oxygen apparatus. Contact with

moisture/water: gas-tight suit.

Emergency procedures : Mark the danger area. Prevent dust cloud formation. Corrosion-proof appliances. Keep

containers closed. Avoid ingress of water in the containers. Wash contaminated clothes. On contact with moisture/water: keep upwind. On contact with moisture/water: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous

material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water

curtain.

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. On land, sweep or shovel into suitable

containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Hygiene measures

: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosionproof 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. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe dust. Avoid contact during pregnancy/while nursing.

: Wash hands/forearms/face thoroughly after handling.

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.

Keep container closed when not in use.

Incompatible products : Strong bases, strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage temperature : 20 °C

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids.

metals. organic materials. water/moisture.

Storage area : Store in a dry area. Keep container in a well-ventilated place. Keep locked up. Unauthorized

persons are not admitted. Meet the legal requirements. Store at ambient temperature.

Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. watertight. corrosion-proof. dry. clean. correctly

labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: stainless steel. nickel. MATERIAL TO AVOID: lead. aluminium. copper.

tin. zinc. bronze. textile.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SODIUM HYDROXIDE, PELLETS (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: natural

rubber. neoprene. nitrile rubber. GIVE LESS RESISTANCE: butyl rubber. polyethylene. PVA.

GIVE POOR RESISTANCE: natural fibres.

Hand protection : Gloves. Wear protective gloves.

Eye protection : Chemical goggles or face shield. Face shield. In case of dust production: protective goggles.

Skin and body protection : Corrosion-proof clothing. In case of dust production: head/neck protection. Wear suitable

protective clothing.

Respiratory protection : Dust production: dust mask with filter type P3. Self-contained breathing apparatus if conc. in air >

2 mg/m3. Wear approved mask.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Crystalline powder. Little spheres. Lumps. Needles. Scales. Flakes.

Molecular mass : 40.00 g/mol
Color : White.
Odor : Odourless.
Odor threshold : No data available

pH : 14 (5 %)

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pH solution : 5 %

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 318 °C

Freezing point : No data available

Boiling point : 1390 °C

Flash point : Not applicable

Self ignition temperature : Not applicable

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : < 0.1 hPa

Relative vapor density at 20 °C : No data available

Relative density : 2.1

Density : 2130 kg/m³

Solubility : Exothermically soluble in water. Soluble in ethanol. Soluble in methanol. Soluble in glycerol.

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),25 °C; 1 mol/l)

Viscosity, dynamic : 1.12 mPa.s (25 °C)

Explosive properties : No data available

Oxidizing properties : No data available

Explosive limits : No data available

9.2. Other information

Minimum ignition energy : Not applicable
Saturation concentration : 671 g/m³
VOC content : Not applicable

Other properties : Translucent. Hygroscopic. Substance has basic reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Violent exothermic reaction with water (moisture): release of corrosive mist. Reacts exothermically on exposure to water (moisture) with combustible materials: risk of spontaneous ignition. 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. Thermal decomposition generates: Corrosive vapors.

10.2. Chemical stability

Hygroscopic. Unstable on exposure to air. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates: Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful in contact with skin.

SODIUM HYDROXIDE, PELLETS (\f)1310-73-2	
LD50 dermal rabbit	1350 mg/kg (Rabbit; Literature, Rabbit; Literature)

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Skin corrosion/irritation : Causes severe skin burns and eye damage. pH: 14 (5 %) Serious eye damage/irritation : Not classified pH: 14 (5 %) Respiratory or skin sensitization : Not classified Germ cell mutagenicity Not classified Carcinogenicity Not classified

Specific target organ toxicity (repeated

exposure)

Reproductive toxicity

: Not classified

: Not classified

: Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and

Specific target organ toxicity (single exposure)

symptoms

: Based on available data, the classification criteria are not met. Harmful in contact with skin.

Symptoms/injuries after inhalation : WHEN PROCESSED: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. ON CONTINUOUS EXPOSURE/CONTACT: Respiratory difficulties.

FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible laryngeal spasm/oedema. Risk of lung oedema.

Blisters. Caustic burns/corrosion of the skin. Slow-healing wounds. Repeated exposure to this Symptoms/injuries after skin contact

material can result in absorption through skin causing significant health hazard. Harmful in

contact with skin.

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

Symptoms/injuries after ingestion Dry/sore throat. Nausea. Abdominal pain. Blood in vomit. Difficulty in swallowing. Possible

esophageal perforation. Burns to the gastric/intestinal mucosa. Bleeding of the gastrointestinal

tract. Shock

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation. Chronic symptoms

Possible inflammation of the respiratory tract. Gastrointestinal complaints.

SECTION 12: Ecological information

Toxicity

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

Ecology - water Ground water pollutant. Maximum concentration in drinking water: 200 mg/l (sodium) (Directive

98/83/EC). Harmful to fishes. Harmful to invertebrates (Daphnia). pH shift.

SODIUM HYDROXIDE, PELLETS (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)

Persistence and degradability 12.2.

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

12.3. **Bioaccumulative potential**

SODIUM HYDROXIDE, PELLETS (1310-73-2)	
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

Mobility in soil

No additional information available

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12.5. Other adverse effects

Other information : Avoid release to the environment.

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. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Local/Federal regulations.

Additional information : LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive

2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : as solid.

ADR

Transport document description : UN 1823, 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



80 1823

: E

Transport by sea

Tunnel restriction code

Orange plates

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

SODIUM HYDROXIDE, PELLETS (1310-73-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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SODIUM HYDROXIDE, PELLETS (1310-73-2)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

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

Met. Corr. 1 H290 Skin Corr. 1A H314

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

C; R35

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations

SODIUM HYDROXIDE, PELLETS(1310-73-2)	
State or local regulations	U.S Massachusetts - Right To Know List U.S New Jersey - Right to Know Hazardous Substance List U.S Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

 . c pacco. ccc ccc c.	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage

NFPA health hazard : 3 - Short exposure could cause serious temporary or

residual injury even though prompt medical attention was

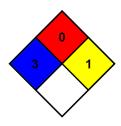
given.

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.



SDS US (GHS HazCom 2012)

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