Safety data sheet

according to 1907/2006/EC, Article 31 Commission regulation (EU) 2020/878

Printing date 15.03.2023 *Version number 8.0 (replaces version 7.0)* *Revision: 15.03.2023*

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

· ***1.1 Product identifier***

· ***Trade name:*** Sodium hydroxide, pellets, for analysis, ExpertQ®, ACS, ISO, Reag. Ph Eur

· ***Article number:*** SO0425
· ***CAS Number:***
1310-73-2
· ***EC number:***
215-185-5
· ***Index number:***
011-002-00-6
· ***1.2 Relevant identified uses of the substance or mixture and uses advised against***
· ***Process category***
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
· ***Application of the substance / the preparation:*** Laboratory reagent

· ***1.3 Details of the supplier of the safety data sheet***
· ***Manufacturer/Supplier:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com
· ***Regional representation:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com

· ***Further information obtainable from:*** technical department
· ***1.4 Emergency telephone number:***
Please contact the regional Scharlab distributor/dealer in your country
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

· ***2.1 Classification of the substance or mixture***
· ***Classification according to Regulation (EC) No 1272/2008***


corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

· ***2.2 Label elements***
· ***Labelling according to Regulation (EC) No 1272/2008***
The substance is classified and labelled according to the GB CLP regulation.

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· ***Hazard pictograms***

GHS05

· ***Signal word*** Danger
· ***Hazard statements***
H314 Causes severe skin burns and eye damage.
· ***Precautionary statements***

P260	Do not breathe dusts or mists.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.

SECTION 3: Composition/information on ingredients

· ***3.1 Substances***
· ***CAS No. Description***
1310-73-2 sodium hydroxide
· ***Identification number(s)***
· ***EC number:*** 215-185-5
· ***Index number:*** 011-002-00-6

SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***General information:***
Take affected persons out of danger area and lay down.
Involve doctor immediately.
· ***After inhalation:***
Take affected persons into fresh air and keep quiet.
In case of unconsciousness place patient stably in side position for transportation.
· ***After skin contact:***
Immediately remove contaminated clothing.
Immediately wash with water and soap and rinse thoroughly.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
· ***After eye contact:***
Eye contact causes painful burns that can cause permanent visual impairment or blindness.
Rinse opened eye for several minutes under running water. Then consult a doctor.
In the event that the injured person wears contact lenses, they must be removed as long as they are not stuck to the eyes, otherwise additional damage could occur.
· ***After swallowing:***
Rinse out mouth and then drink plenty of water.

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Never give anything by mouth to an unconscious person.
Do not induce vomiting; call for medical help immediately.

· ***4.2 Most important symptoms and effects, both acute and delayed***
The main symptoms are described for different cases of contact: Skin, eyes, inhalation and ingestion.

· ***4.3 Indication of any immediate medical attention and special treatment needed***
Treat symptomatically.

SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents:***
Use extinguishing measures that are appropriate to local circumstances and the surrounding enviroment.

· ***5.2 Special hazards arising from the substance or mixture***
Formation of toxic gases is possible during heating or in case of fire.
Vapours may form explosive mixtures with air.

· ***5.3 Advice for firefighters***
· ***Protective equipment:***
In the work of extinction it is necessary to provide respiratory protection and full chemical protective clothing.
Cool exposed containers with water spray or mist.

· ***Additional information***
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Avoid formation of dust.
Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.

· ***6.2 Environmental precautions:*** Do not allow to enter sewers/ surface or ground water.

· ***6.3 Methods and material for containment and cleaning up:***
Sweep spilled substance into containers.
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling***
Keep away from heat and sources of ignition.
Avoid breathing mist/vapours/spray.
Provide suction extractors if dust is formed.
Thorough dedusting.
Do not eat, drink or smoke during use.
Wash hands after any manipulation.

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· ***Information about fire - and explosion protection:***
Use explosion-proof apparatus / fittings and spark-proof tools.
Dust can combine with air to form an explosive mixture.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:***
Store in a cool, dry, well-ventilated place.
Store only in unopened original receptacles.
Use only receptacles specifically permitted for this substance/product.
· ***Information about storage in one common storage facility:*** Not required.
· ***Further information about storage conditions:***
Keep container tightly sealed.
See product's label for recommended storage temperature.
· ***7.3 Specific end use(s)*** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***
· ***Ingredients with limit values that require monitoring at the workplace:***

1310-73-2 sodium hydroxide
WEL Short-term value: 2 mg/m³
· ***DNELs***
DNEL consumer, prolonged. Local effects: Inhalative - 1 mg/m3
DNEL worker, cronic. Local effects: Inhalative - 1 mg/m3
· ***Additional information:*** The lists valid during the making were used as basis.

· ***8.2 Exposure controls***
· ***Appropriate engineering controls*** No further data; see item 7.
· ***Individual protection measures, such as personal protective equipment***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· ***Respiratory protection:*** Not required.
· ***Hand protection***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· ***Penetration time of glove material***
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· ***Eye/face protection***

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Physical state***	Solid
· ***Colour:***	White
· ***Odour:***	Odourless
· ***Odour threshold:***	Not determined.
· ***Melting point/freezing point:***	315 °C
· ***Boiling point or initial boiling point and boiling range***	410 °C
· ***Flammability***	Product is not flammable.
· ***Lower and upper explosion limit***	
· ***Lower:***	Not determined.
· ***Upper:***	Not determined.
· ***Flash point:***	Not applicable.
· ***Decomposition temperature:***	Not determined.
· ***pH***	>14
· ***Viscosity:***	
· ***Kinematic viscosity***	Not applicable.
· ***Dynamic:***	Not applicable.
· ***Solubility***	
· ***water at 20 °C:***	420 g/l
· ***Partition coefficient n-octanol/water (log value)***	Not determined.
· ***Vapour pressure at 20 °C:***	10 hPa
· ***Density and/or relative density***	
· ***Density at 20 °C:***	1.99 g/cm³
· ***Relative density***	Not determined.
· ***Vapour density***	Not applicable.
· ***9.2 Other information***	
· ***Appearance:***	
· ***Form:***	Pellets
· ***Important information on protection of health and environment, and on safety.***	
· ***Auto-ignition temperature:***	Not determined.
· ***Explosive properties:***	Product does not present an explosion hazard.
· ***Molecular weight***	40 g/mol
· ***Change in condition***	
· ***Evaporation rate***	Not applicable.
· ***Information with regard to physical hazard classes***	
· ***Explosives***	Void
· ***Flammable gases***	Void
· ***Aerosols***	Void
· ***Oxidising gases***	Void
· ***Gases under pressure***	Void

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· ***Flammable liquids***	Void
· ***Flammable solids***	Void
· ***Self-reactive substances and mixtures***	Void
· ***Pyrophoric liquids***	Void
· ***Pyrophoric solids***	Void
· ***Self-heating substances and mixtures***	Void
· ***Substances and mixtures, which emit flammable gases in contact with water***	Void
· ***Oxidising liquids***	Void
· ***Oxidising solids***	Void
· ***Organic peroxides***	Void
· ***Corrosive to metals***	Void
· ***Desensitised explosives***	Void

SECTION 10: Stability and reactivity

· ***10.1 Reactivity***
Stable under normal conditions. If used according to the regulation no decomposition occurs.
· ***10.2 Chemical stability***
· ***Thermal decomposition / conditions to be avoided:***
No decomposition if used and stored according to specifications.
· ***10.3 Possibility of hazardous reactions***
Reacts with strong acids.
Strong exothermic reaction with acids.
· ***10.4 Conditions to avoid***
Heat
Exposure to light
Exposure to moisture.
· ***10.5 Incompatible materials:***
Strong acids
Organic materials
Various metals
· ***10.6 Hazardous decomposition products:***
In case of fire: see section 5.
Hazardous descomposition products formed under fire conditions: -Sodium oxides.

SECTION 11: Toxicological information

· ***11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008***
· ***Skin corrosion/irritation***
Skin - Rabbit
Result: Irritating to skin - 24 h
Causes severe skin burns and eye damage.
· ***Serious eye damage/irritation***
Eyes - Rabbit
Resul: Irritating to eyes.
· ***Respiratory or skin sensitisation***
Patch test: - Human
Result: negative
· ***Carcinogenicity***
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by (IARC) International Agency of Research of Carcinogens.

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· ***STOT-single exposure***
Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Acute inhalation toxicity - Burns of mucous membranes, cough, shortness of breath and possible damage of the respiratory tract.
· ***11.2 Information on other hazards***
· ***Endocrine disrupting properties*** Substance is not listed.

SECTION 12: Ecological information

· ***12.1 Toxicity***
· ***Aquatic toxicity:***
Toxicity to fish
LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates
EC50 static test - Ceriodaphnia (Water flea) - 40.4 mg/L - 48 h
Toxicity to bacteria
CE50 - Photobacterium phosphoreum - 22 mg/L - 15 min
· ***12.2 Persistence and degradability***
The methods for the determination of biological degradability are not applicable for inorganic substances.
· ***12.3 Bioaccumulative potential*** Non significant accumulation in organisms
· ***12.4 Mobility in soil*** No further relevant information available.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.
· ***12.6 Endocrine disrupting properties***
The product does not contain substances with endocrine disrupting properties.
· ***12.7 Other adverse effects***
Additional ecological information
Hazard for drinking water supplies.
Discharge into the environment must be avoided.
Toxic to water organisms, with long term harmful effects.
Harmful effect due to pH shift.
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must be specially treated adhering to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· ***Uncleaned packaging:***
· ***Recommendation:***
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
· ***Recommended cleansing agents:*** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· ***14.1 UN number or ID number***
· ***ADR, IMDG, IATA*** UN1823
· ***14.2 UN proper shipping name***
· ***ADR*** 1823 SODIUM HYDROXIDE, SOLID
· ***IMDG, IATA*** SODIUM HYDROXIDE, SOLID
· ***14.3 Transport hazard class(es)***

· ***ADR, IMDG, IATA***

· ***Class*** 8 Corrosive substances.
· ***Label*** 8
· ***14.4 Packing group***
· ***ADR, IMDG, IATA*** II
· ***14.5 Environmental hazards:***
· ***Marine pollutant:*** No
· ***14.6 Special precautions for user*** Warning: Corrosive substances.
· ***Hazard identification number (Kemler code):*** 80
· ***EMS Number:*** 8-06
· ***Segregation groups*** (SGG18) Alkalis
· ***Stowage Category*** A
· ***Segregation Code*** SG35 Stow "separated from" SGG1-acids
· ***14.7 Maritime transport in bulk according to IMO instruments*** Not applicable.

· ***Transport/Additional information:***

· ***ADR***
· ***Limited quantities (LQ)*** 1 kg
· ***Transport category*** 2
· ***Tunnel restriction code*** E
· ***UN "Model Regulation":*** UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

SECTION 15: Regulatory information

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

· ***Directive 2012/18/EU***
· ***Named dangerous substances - ANNEX I*** -
· ***15.2 Chemical safety assessment:*** A Chemical Safety Assessment has been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· ***Department issuing SDS:*** product safety department
· ***Contact:*** msds@scharlab.com
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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Annex: Exposure scenario 1

· ***1 - Short title of the exposure scenario***
Exposure scenario: Sodium hydroxide
Industrial use
· ***Sector of Use***
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· ***Product category*** PC21 Laboratory chemicals
· ***Process category*** PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***2 - Conditions of use***
· ***Duration and frequency***
5 workdays/week.
Emission days (days/year): 200
· ***Physical parameters***
· ***Physical state*** Solid
· ***Concentration of the substance in the mixture***
Raw material.
It covers a percentage of substance in the product up to 100 %
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** No special measures required.
· ***Other operational conditions affecting worker exposure***
Avoid contact with eyes.
Avoid contact with the skin.
· ***Risk management measures***
The aim is to prevent the passage of NaOH solutions to municipal wastewater or to surface water . If such discharges are expected to cause significant changes in pH , it is required to regularly monitor the pH during introduction into open water . Overall downloads are made so that the pH variations are minimized on the surface of the receiving waters.

Most aquatic organisms can tolerate pH values of 6 to 9. This is also reflected in the description of standard OECD tests with aquatic organisms.
· ***Worker protection***
· ***Organisational protective measures***
Provide Internal Plant Instruction.
Handling procedures must be well documented.
Ensure that activities are executed by specialists or authorised personnel only.
Workers processes / areas identified risk should be trained to :
a) Avoid working without respiratory protection
b) To understand the corrosive properties of the substance with they work
c) Observe the safest procedures indicated by the employer
The employer must also ensure that the required personal protective equipment is available and it is used as directed.
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
· ***Technical protective measures***
Ensure that suitable extractors are available on processing machines
Replace, if possible, manual processes by automated processes and / or closed. This would avoid irritating mists, sprays and splashes.
Store in cool, dry place in tightly closed receptacles.

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Only handle and refill product in closed systems.
The work process has to be performed under closed conditions.
Put lid on container immediately after use.
Use closeable conveyance devices.
Using forceps, claws with long handles in the hand to avoid direct contact and exposure by splashes.
Ensure good ventilation/exhaustion at the workplace.

· ***Personal protective measures***
Do not inhale dust / smoke / mist.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Recommended material for gloves :

- Butyl rubber , PVC , polychloroprene with natural latex liner , material thickness: 0,5 mm , breakthrough time: >480min.

- Nitrile rubber , fluoro rubber , material thickness: 0,35-0,4mm , breakthrough time: >480min.

Respiratory protection: In case of dust or aerosol formation (eg by spraying) use respiratory protection with approved filter (P2).
Use protective suit.
Apron
Rubber boots or plastic.

· ***Measures for consumer protection*** Ensure adequate labelling.

· ***Environmental protection measures***
The risk assessment for the environment is only applicable to the aquatic environment, when applicable, including treatment plants, wastewater (STP) / plants wastewater treatment plant (WWTP), as emissions of NaOH in different life cycle stages (production and use) mainly apply to water (waste).

· ***Air***
No special measures required.
No major air emissions are expected due to the very low vapor pressure of NaOH.

· ***Water***
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Risk assessment and aquatic effect only deal with the effect on ecosystems / organisms due to possible pH changes related downloads OH-, as it is expected that the toxicity of Na + ions is insignificant compared to the effect (potential) pH .

Only the local scale will be treated, including sewage treatment plant STP or, where applicable, both for production and for industrial use. Any effect that may arise would be expected to take place in a local.
The high water solubility and very low vapor pressure indicate that NaOH is predominant in water.
The exposure assessment for the aquatic environment will only deal with the possible pH changes in STP effluent and surface water related to the OH- released locally.

· ***Soil***
No special measures required.
No significant emissions to the terrestrial environment are expected.

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The sludge application route is not relevant to the issue to agricultural land , because there will be no sorption of NaOH to particulate STP / WWTP.

· ***Disposal measures***
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.

· ***Waste type***
Liquid product residues
Aqueous solution
Partially emptied and uncleaned packaging

· ***3 - Exposure estimation***

· ***Worker (oral)*** No significant oral exposure

· ***Worker (dermal)*** No significant dermal exposure

· ***Worker (inhalation)***
PROC 15: < 1 (mg/m3)
RCR: <1

· ***4 - Guidance for downstream users***
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.
Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.
For the risk assessment, the tools recommended by ECHA can be used.

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Annex: Exposure scenario 2

· ***1 - Short title of the exposure scenario*** Laboratory use
· ***Sector of Use***
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· ***Product category*** PC21 Laboratory chemicals
· ***Process category*** PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC9b Widespread use of functional fluid (outdoor)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***2 - Conditions of use***
· ***Duration and frequency***
5 workdays/week.
Emission days (days/year): 200
· ***Physical parameters***
· ***Physical state*** Solid
· ***Concentration of the substance in the mixture***
Raw material.
It covers a percentage of substance in the product up to 100 %
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** No special measures required.
· ***Other operational conditions affecting worker exposure***
Avoid contact with eyes.
Avoid contact with the skin.
· ***Risk management measures***
The aim is to prevent the passage of NaOH solutions to municipal wastewater or to surface water . If such discharges are expected to cause significant changes in pH , it is required to regularly monitor the pH during introduction into open water . Overall downloads are made so that the pH variations are minimized on the surface of the receiving waters.

Most aquatic organisms can tolerate pH values of 6 to 9. This is also reflected in the description of standard OECD tests with aquatic organisms.
· ***Worker protection***
· ***Organisational protective measures***
Provide Internal Plant Instruction.
Handling procedures must be well documented.
Ensure that activities are executed by specialists or authorised personnel only.
Workers processes / areas identified risk should be trained to :
a) Avoid working without respiratory protection
b) To understand the corrosive properties of the substance with they work
c) Observe the safest procedures indicated by the employer
The employer must also ensure that the required personal protective equipment is available and it is used as directed.
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
· ***Technical protective measures***
Ensure that suitable extractors are available on processing machines
Replace, if possible, manual processes by automated processes and / or closed. This would avoid irritating mists, sprays and splashes.
Store in cool, dry place in tightly closed receptacles.
Only handle and refill product in closed systems.

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Safety data sheet

according to 1907/2006/EC, Article 31 Commission regulation (EU) 2020/878

Printing date 15.03.2023 *Version number 8.0 (replaces version 7.0)* *Revision: 15.03.2023*

Trade name: Sodium hydroxide, pellets, for analysis, ExpertQ®, ACS, ISO, Reag. Ph Eur

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The work process has to be performed under closed conditions.
Put lid on container immediately after use.
Use closeable conveyance devices.
Using forceps, claws with long handles in the hand to avoid direct contact and exposure by splashes.
Ensure good ventilation/exhaustion at the workplace.

· ***Personal protective measures***
Do not inhale dust / smoke / mist.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Recommended material for gloves :

- Butyl rubber , PVC , polychloroprene with natural latex liner , material thickness: 0,5 mm , breakthrough time: >480min.

- Nitrile rubber , fluoro rubber , material thickness: 0,35-0,4mm , breakthrough time: >480min.

Respiratory protection: In case of dust or aerosol formation (eg by spraying) use respiratory protection with approved filter (P2).
Use protective suit.
Apron
Rubber boots or plastic.

· ***Measures for consumer protection*** Ensure adequate labelling.

· ***Environmental protection measures***
The risk assessment for the environment is only applicable to the aquatic environment, when applicable, including treatment plants, wastewater (STP) / plants wastewater treatment plant (WWTP), as emissions of NaOH in different life cycle stages (production and use) mainly apply to water (waste).

· ***Air***
No special measures required.
No major air emissions are expected due to the very low vapor pressure of NaOH.

· ***Water***
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Risk assessment and aquatic effect only deal with the effect on ecosystems / organisms due to possible pH changes related downloads OH-, as it is expected that the toxicity of Na + ions is insignificant compared to the effect (potential) pH .

Only the local scale will be treated, including sewage treatment plant STP or, where applicable, both for production and for industrial use. Any effect that may arise would be expected to take place in a local.
The high water solubility and very low vapor pressure indicate that NaOH is predominant in water.
The exposure assessment for the aquatic environment will only deal with the possible pH changes in STP effluent and surface water related to the OH- released locally.

· ***Soil***
No special measures required.
No significant emissions to the terrestrial environment are expected.
The sludge application route is not relevant to the issue to agricultural land , because there will be no sorption of NaOH to particulate STP / WWTP.

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· ***Disposal measures***
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· ***Waste type***
Liquid product residues
Aqueous solution
Partially emptied and uncleaned packaging
· ***3 - Exposure estimation***
· ***Worker (oral)*** No significant oral exposure
· ***Worker (dermal)*** No significant dermal exposure
· ***Worker (inhalation)***
PROC 15: < 1 (mg/m3)
RCR: <1
· ***4 - Guidance for downstream users***
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.
Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.
For the risk assessment, the tools recommended by ECHA can be used.