

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

1 Identification

- **Product identifier**
- **Trade name:** Sodium Hydroxide
- **Article number:** 21160, 21162, 21160-sp
- **CAS Number:**
1310-73-2
- **EC number:**
215-185-5
- **Index number:**
011-002-00-6
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.
 Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe dusts or mists.
Wear eye protection / face protection.
Keep only in original container.
Wash thoroughly after handling.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 1)

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
IF INHALED: *Remove person to fresh air and keep comfortable for breathing.*
Wash contaminated clothing before reuse.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Absorb spillage to prevent material damage.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
1310-73-2 Sodium Hydroxide
- **Identification number(s)**
- **EC number:** 215-185-5
- **Index number:** 011-002-00-6

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 2)

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

1310-73-2 Sodium Hydroxide

PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 3)

- **Exposure controls**
- **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.
- **Breathing equipment:** Not required.
- **Protection of hands:**



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.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Pellets
Color:	White
Odor:	Odorless
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· Change in condition

Melting point/Melting range:	318 °C (604 °F)
Boiling point/Boiling range:	1390 °C (2534 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· Ignition temperature:

Decomposition temperature: Not determined.

· **Auto igniting:** Not determined.

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 4)

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure at 800 °C (1472 °F):** 3.5 hPa (3 mm Hg)

· **Density at 20 °C (68 °F):** 2.13 g/cm³ (17.775 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water at 20 °C (68 °F): 420 g/l

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

· **Primary irritant effect:**

· **on the skin:** Strong caustic effect on skin and mucous membranes.

· **on the eye:** Strong caustic effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)** Substance is not listed.

· **NTP (National Toxicology Program)** Substance is not listed.

· **OSHA-Ca (Occupational Safety Health Administration)** Substance is not listed.

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 5)


12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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 bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | <p style="margin: 0;">UN1823</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, IATA · ADR · IMDG | <p style="margin: 0;">Sodium hydroxide, solid</p> <p style="margin: 0;">1823 Sodium hydroxide, solid</p> <p style="margin: 0;">SODIUM HYDROXIDE, SOLID</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <div style="text-align: center; margin-bottom: 10px;">  </div> <p style="margin: 0;">8 Corrosive substances</p> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin: 0;">8</p> |

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 6)

· ADR, IMDG, IATA



· **Class** 8 Corrosive substances
 · **Label** 8

· **Packing group**
 · **DOT, ADR, IMDG, IATA** II

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Corrosive substances
 · **Danger code (Kemler):** 80
 · **EMS Number:** 8-06
 · **Segregation groups** Alkalis
 · **Stowage Category** A
 · **Segregation Code** SG35 Stow "separated from" acids.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 15 kg
 On cargo aircraft only: 50 kg
 · **Hazardous substance:** 1000 lbs, 454 kg

· **ADR**
 · **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

· **IMDG**
 · **Limited quantities (LQ)** 1 kg
 · **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

· **UN "Model Regulation":** UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 7)

- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard statements**
 - May be corrosive to metals.*
 - Causes severe skin burns and eye damage.*
- **Precautionary statements**
 - Do not breathe dusts or mists.*
 - Wear eye protection / face protection.*
 - Keep only in original container.*
 - Wash thoroughly after handling.*
 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 - Immediately call a POISON CENTER/doctor.*
 - Specific treatment (see on this label).*
 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
 - Wash contaminated clothing before reuse.*
 - If swallowed: Rinse mouth. Do NOT induce vomiting.*
 - Absorb spillage to prevent material damage.*
 - Store locked up.*
 - Store in corrosive resistant container with a resistant inner liner.*
 - Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

- **Date of preparation / last revision** 04/20/2016 / -
- **Abbreviations and acronyms:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - ACGIH: American Conference of Governmental Industrial Hygienists
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - NIOSH: National Institute for Occupational Safety

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 8)

*OSHA: Occupational Safety Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Met. Corr. 1: Corrosive to metals, Hazard Category 1**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*

US

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

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

- **Product identifier**
- **Trade name:** Sodium Hydroxide
- **Article number:** 21160, 21162, 21160-sp
- **CAS Number:**
1310-73-2
- **EC number:**
215-185-5
- **Index number:**
011-002-00-6
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 1)

· Hazard pictograms



GHS05

· Signal word *Danger*

· Hazard statements

*May be corrosive to metals.**Causes severe skin burns and eye damage.*

· Precautionary statements

*Do not breathe dusts or mists.**Wear eye protection / face protection.**Keep only in original container.**Wash thoroughly after handling.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific treatment (see on this label).**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**Wash contaminated clothing before reuse.**IF SWALLOWED: rinse mouth. Do NOT induce vomiting.**Absorb spillage to prevent material damage.**Store locked up.**Store in corrosive resistant container with a resistant inner liner.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

· Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: *Substances*· CAS No. *Description*

1310-73-2 Sodium Hydroxide

· Identification number(s)

· **EC number:** 215-185-5· **Index number:** 011-002-00-6

4 First aid measures

· Description of first aid measures

· **General information:** *Immediately remove any clothing soiled by the product.*· **After inhalation:** *In case of unconsciousness place patient stably in side position for transportation.*· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*· **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*· **After swallowing:** *Drink plenty of water and provide fresh air. Call for a doctor immediately.*

· Information for doctor:

· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

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

1310-73-2 Sodium Hydroxide

NES | Peak limitation: 2 mg/m³

- **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 4)

AU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 3)

- **Exposure controls**
- **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.
- **Protection of hands:**



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.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Pellets
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· Change in condition

Melting point/Melting range:	318 °C
Boiling point/Boiling range:	1390 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· Ignition temperature:

Decomposition temperature: Not determined.

· **Self-igniting:** Not determined.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 4)

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure at 800 °C:** 3.5 hPa

· **Density at 20 °C:** 2.13 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with water at 20 °C:** 420 g/l

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation** Strong caustic effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

(Contd. on page 6)

-AU-

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide


(Contd. of page 5)

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADG, IMDG, IATA	UN1823
· UN proper shipping name	
· ADG	1823 SODIUM HYDROXIDE, SOLID
· IMDG	SODIUM HYDROXIDE, SOLID
· IATA	Sodium hydroxide, solid
· Transport hazard class(es)	
· ADG, IMDG, IATA	
	
· Class	8 Corrosive substances.
· Label	8
· Packing group	
· ADG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Corrosive substances.
· Danger code (Kemler):	80
· EMS Number:	8-06
· Segregation groups	Alkalis
· Stowage Category	A

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 6)

· Segregation Code	SG35 Stow "separated from" acids.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Australian Inventory of Chemical Substances** Substance is listed.

· Standard for the Uniform Scheduling of Medicines and Poisons		
1310-73-2	Sodium Hydroxide	S5, S6, S10

- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe dusts or mists.
Wear eye protection / face protection.
Keep only in original container.
Wash thoroughly after handling.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Wash contaminated clothing before reuse.

(Contd. on page 8)

-AU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 7)

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

AU

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

1 Identification

- **Product identifier**
- **Trade name:** Sodium Hydroxide
- **Article number:** 21160, 21162, 21160-sp
- **CAS Number:**
1310-73-2
- **EC number:**
215-185-5
- **Index number:**
011-002-00-6
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Corrosive to Metals - Category 1 H290 May be corrosive to metals.
 Skin Corrosion - Category 1A H314 Causes severe skin burns and eye damage.
 Serious Eye Damage - Category 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep only in original packaging.
Wash thoroughly after handling.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 1)

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

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

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material-damage.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects

E - Corrosive material



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

1310-73-2 Sodium Hydroxide

· **Identification number(s)**

· **EC number:** 215-185-5

· **Index number:** 011-002-00-6

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 2)

- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Thorough dusting.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

1310-73-2 Sodium Hydroxide

EL Ceiling limit value: 2 mg/m³

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 3)

EV Ceiling limit value: 2 mg/m³

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **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.

· **Breathing equipment:** Not required.

· **Protection of hands:**



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.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Pellets

Color: White

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: 318 °C

Boiling point/Boiling range: 1390 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

(Contd. on page 5)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 4)

· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 800 °C:	3.5 hPa
· Density at 20 °C:	2.13 g/cm ³
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water at 20 °C:	420 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

· Primary irritant effect:

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** No sensitizing effects known.

· Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories

- **IARC (International Agency for Research on Cancer)** Substance is not listed.

(Contd. on page 6)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 5)

- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety Health Administration)** Substance is not listed.


12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
*Water hazard class 1 (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 bodies of water or drainage ditch undiluted or unneutralized.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|------------------------------|
| UN-Number | UN1823 |
| DOT, TDG, IMDG, IATA | |
| UN proper shipping name | Sodium hydroxide, solid |
| DOT, IATA | 1823 Sodium hydroxide, solid |
| TDG | 1823 Sodium hydroxide, solid |
| IMDG | SODIUM HYDROXIDE, SOLID |
| Transport hazard class(es) | |
| DOT | |
|  | |
| Class | 8 Corrosive substances |

(Contd. on page 7)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 6)

- **Label** 8
- **TDG, IMDG, IATA**



- **Class** 8 Corrosive substances
- **Label** 8

- **Packing group**
- **DOT, TDG, IMDG, IATA** II

- **Environmental hazards:** Not applicable.

- **Special precautions for user** Warning: Corrosive substances
- **Danger code (Kemler):** 80
- **EMS Number:** 8-06
- **Segregation groups** Alkalis
- **Stowage Category** A
- **Segregation Code** SG35 Stow "separated from" acids.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **Transport/Additional information:**

- **DOT**
- **Quantity limitations** On passenger aircraft/rail: 15 kg
On cargo aircraft only: 50 kg
- **Hazardous substance:** 1000 lbs, 454 kg

- **TDG**
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g

- **IMDG**
- **Limited quantities (LQ)** 1 kg
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g

- **UN "Model Regulation":** UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.

(Contd. on page 8)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 7)

- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard statements**
 - May be corrosive to metals.*
 - Causes severe skin burns and eye damage.*
- **Precautionary statements**
 - Do not breathe dust/fume/gas/mist/vapours/spray.*
 - Wear protective gloves/protective clothing/eye protection/face protection.*
 - Keep only in original packaging.*
 - Wash thoroughly after handling.*
 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 - Immediately call a POISON CENTER/doctor.*
 - Specific treatment (see on this label).*
 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
 - Wash contaminated clothing before reuse.*
 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.*
 - Absorb spillage to prevent material-damage.*
 - Store locked up.*
 - Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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.

- **Date of preparation / last revision** 04/20/2016 / -
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods*
 - DOT: US Department of Transportation*
 - IATA: International Air Transport Association*
 - ACGIH: American Conference of Governmental Industrial Hygienists*
 - EINECS: European Inventory of Existing Commercial Chemical Substances*
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)*
 - NFPA: National Fire Protection Association (USA)*
 - HMIS: Hazardous Materials Identification System (USA)*
 - WHMIS: Workplace Hazardous Materials Information System (Canada)*
 - LC50: Lethal concentration, 50 percent*
 - LD50: Lethal dose, 50 percent*

(Contd. on page 9)

CA

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/20/2016

Reviewed on 04/20/2016

Trade name: Sodium Hydroxide

(Contd. of page 8)

*PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety **Health******Corrosive to Metals - Category 1: Corrosive to metals, Hazard Category 1******Skin Corrosion - Category 1A: Skin corrosion/irritation, Hazard Category 1A******Serious Eye Damage - Category 1: Serious eye damage/eye irritation, Hazard Category 1***

CA

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

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

- **Product identifier**
- **Trade name:** Sodium Hydroxide
- **Article number:** 21160, 21162, 21160-sp
- **CAS Number:**
1310-73-2
- **EC number:**
215-185-5
- **Index number:**
011-002-00-6
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



corrosion

Met. Corr.1 H290 May be corrosive to metals.
 Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.
 Aquatic Acute 3 H402 Harmful to aquatic life.

- **Label elements**
- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
Harmful to aquatic life.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 1)

- **Precautionary statements**
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- Immediately call a POISON CENTER/doctor.*
- Specific treatment (see on this label).*
- Store locked up.*
- Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**
- **CAS No. Description**
- 1310-73-2 Sodium Hydroxide*
- **Identification number(s)**
- **EC number:** 215-185-5
- **Index number:** 011-002-00-6

4 First aid measures

- **Description of first aid measures**
- **General information:** *Immediately remove any clothing soiled by the product.*
- **After inhalation:** *In case of unconsciousness place patient stably in side position for transportation.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
- **After swallowing:** *Drink plenty of water and provide fresh air. Call for a doctor immediately.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Indication of any immediate medical attention and special treatment needed**
- No further relevant information available.*

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- Wear protective equipment. Keep unprotected persons away.*
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:**
- Use neutralising agent.*

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 2)

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **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.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling** Thorough dedusting.

· **Information about fire - and explosion protection:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep container tightly sealed.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **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.

· **Protection of hands:**



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.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 3)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Pellets
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range:	318 °C
Boiling point/Boiling range:	1390 °C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 800 °C: 3.5 hPa

· Density at 20 °C: 2.13 g/cm³

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with water at 20 °C:

420 g/l

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity: No further relevant information available.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 4)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation** Strong caustic effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31


Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 5)

14 Transport information

· UN-Number · ADR, IMDG, IATA	UN1823
· UN proper shipping name · ADR · IMDG · IATA	1823 SODIUM HYDROXIDE, SOLID SODIUM HYDROXIDE, SOLID Sodium hydroxide, solid
· Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· Packing group · ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Corrosive substances. 80 8-06 Alkalis A SG35 Stow "separated from" acids.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category · Tunnel restriction code	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- GHS label elements
The substance is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 6)

· **Hazard pictograms**

GHS05

· **Signal word** *Danger*· **Hazard statements***May be corrosive to metals.**Causes severe skin burns and eye damage.**Harmful to aquatic life.*· **Precautionary statements***IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific treatment (see on this label).**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Directive 2012/18/EU**· **Named dangerous substances - ANNEX I** *Substance is not listed.*· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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.

· **Abbreviations and acronyms:***ADR: Accord européen sur le transport 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**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Met. Corr. 1: Corrosive to metals, Hazard Category 1**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1**Aquatic Acute 3: Hazardous to the aquatic environment - Acute Hazard, Category 3*

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

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

- **1.1 Product identifier**
- **Trade name:** Sodium Hydroxide
- **Article number:** 21160, 21162, 21160-sp
- **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**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

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



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

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



GHS05

- **Signal word** Danger
- **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 1)

· Precautionary statements

P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.*

P321 *Specific treatment (see on this label).*

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 Chemical characterisation: 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: Immediately remove any clothing soiled by the product.

· After inhalation: In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media**· Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· 5.2 Special hazards arising from the substance or mixture No further relevant information available.

· 5.3 Advice for firefighters

· Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

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

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 2)

- **6.3 Methods and material for containment and cleaning up:**
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** Thorough dedusting.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· 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/m ³

- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **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.
- **Protection of hands:**



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.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 3)

- **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.

- **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Pellets

Colour: White

- **Odour:** Odourless

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: 318 °C

Boiling point/Boiling range: 1390 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- **Self-igniting:** Not determined.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure at 800 °C:** 3.5 hPa

- **Density at 20 °C:** 2.13 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not applicable.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with**

water at 20 °C: 420 g/l

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 4)

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 5)

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA

UN1823

· 14.2 UN proper shipping name

· ADR

1823 SODIUM HYDROXIDE, SOLID

· IMDG

SODIUM HYDROXIDE, SOLID

· 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:

Not applicable.

· 14.6 Special precautions for user

Warning: Corrosive substances.

· Danger code (Kemler):

80

· EMS Number:

8-06

· Segregation groups

Alkalis

· Stowage Category

A

· Segregation Code

SG35 Stow "separated from" acids.

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1 kg

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· Transport category

2

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.04.2016

Revision: 20.04.2016

Trade name: Sodium Hydroxide

(Contd. of page 6)

· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· 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 Substance is not listed.**
- **15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**

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.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

PUNKT 1: Identifikation af stoffet/blandingen og af selskabet/virksomheden

- **1.1 Produktidentifikator**
- **Handelsnavn:** natriumhydroxid
- **Artikelnummer:** 21160, 21162, 21160-sp
- **CAS-nummer:**
1310-73-2
- **EC-nummer:**
215-185-5
- **Indeksnummer:**
011-002-00-6
- **1.2 Relevante identificerede anvendelser for stoffet eller blandingen samt anvendelser, der frarådes**
Der står ingen yderligere, relevante informationer til rådighed.
- **Stoffets/præparatets anvendelse** Laboratoriekemikalier
- **1.3 Nærmere oplysninger om leverandøren af sikkerhedsdatabladet**
- **Producent/leverandør**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **For yderligere information:** Product safety department
- **1.4 Nødtelefon:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

PUNKT 2: Fareidentifikation

- **2.1 Klassificering af stoffet eller blandingen**
- **Klassificering i henhold til forordning (EF) nr. 1272/2008**



GHS05 ætsning

Met. Corr.1 H290 Kan ætse metaller.
Skin Corr. 1A H314 Forårsager svære forbrændinger af huden og øjenskader.
Eye Dam. 1 H318 Forårsager alvorlig øjenskade.

- **2.2 Mærkningselementer**
- **Mærkning i henhold til forordning (EF) nr. 1272/2008**
Denne substans er klassificeret og mærket iht. CLP-forordningen.
- **Farepiktogrammer**



GHS05

- **Signalord** Fare
- **Faresætninger**
H290 Kan ætse metaller.
H314 Forårsager svære forbrændinger af huden og øjenskader.

(Fortsættes på side 2)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

Handelsnavn: natriumhydroxid

(Fortsat fra side 1)

- **Sikkerhedssætninger**

P303+P361+P353 **VED KONTAKT MED HUDEN (eller håret):** Alt tilsmudset tøj tages straks af. Skyl/brus huden med vand.

P305+P351+P338 **VED KONTAKT MED ØJNENE:** Skyl forsigtigt med vand i flere minutter. Fjern eventuelle kontaktlinser, hvis dette kan gøres let. Fortsæt skylning.

P310 Ring omgående til en GIFTINFORMATION/læge.

P321 Særlig behandling (se på denne etiket).

P405 Opbevares under lås.

P501 Bortskaffelse af indholdet/holderen i henhold til de lokale/regionale/nationale/internationale forskrifter.

- **2.3 Andre farer**

- **Resultater af PBT- og vPvB-vurdering**

- **PBT:** Ikke relevant.

- **vPvB:** Ikke relevant.

PUNKT 3: Sammensætning af/oplysning om indholdsstoffer

- **3.1 Kemisk betegnelse: Stoffer**

- **CAS-nr. betegnelse**

1310-73-2 natriumhydroxid

- **Identifikationsnummer (-numre)**

- **EC-nummer:** 215-185-5

- **Indeksnummer:** 011-002-00-6

PUNKT 4: Førstehjælpsforanstaltninger

- **4.1 Beskrivelse af førstehjælpsforanstaltninger**

- **Generelle anvisninger:** Tøj, der er forurenede med produktet, skal tages af med det samme.

- **Efter indånding:** I tilfælde af bevidstløshed skal den tilskadede lægges ned og transporteres i stabilt sideleje.

- **Efter hudkontakt:** Skal omgående vaskes af med vand og sæbe, skyl godt efter.

- **Efter øjenkontakt:** Skyl øjnene med åbent øjenlåg i flere minutter under rindende vand og søg læge.

- **Efter indtagelse:** Drik rigeligt vand og sørg for frisk luft. Tilkald omgående læge.

- **4.2 Vigtigste symptomer og virkninger, både akutte og forsinkede**

Der står ingen yderligere, relevante informationer til rådighed.

- **4.3 Angivelse af om øjeblikkelig lægehjælp og særlig behandling er nødvendig**

Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 5: Brandbekæmpelse

- **5.1 Slukningsmidler**

- **Egnede slukningsmidler:**

CO₂, slukningspulver eller vandspraystråle. Større brande bekæmpes med vandspraystråle eller alkoholbestandigt skum.

- **5.2 Særlige farer i forbindelse med stoffet eller blandingen**

Der står ingen yderligere, relevante informationer til rådighed.

- **5.3 Anvisninger for brandmandskab**

- **Særlige værnemidler:** Der kræves ingen særlige forholdsregler.

DK

(Fortsættes på side 3)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

Handelsnavn: natriumhydroxid

(Fortsat fra side 2)

PUNKT 6: Forholdsregler over for udslip ved uheld

- **6.1 Personlige sikkerhedsforanstaltninger, personlige værnemidler og nødprocedurer**
Bær beskyttelsesudstyr. Hold ubeskyttede personer borte.
- **6.2 Miljøbeskyttelsesforanstaltninger:** Må ikke udledes i kloaksystemet/overfladevand/grundvand.
- **6.3 Metoder og udstyr til inddæmning og oprensning:**
Brug neutraliseringsmiddel.
Kontamineret materiale skal bortskaffes som affald ifølge punkt 13.
Sørg for tilstrækkelig udluftning.
- **6.4 Henvisning til andre punkter**
Information om sikker håndtering se kapitel 7.
Informationer vedrørende personlige værnemidler se kapitel 8.
Informationer om bortskaffelse se kapitel 13.

PUNKT 7: Håndtering og opbevaring

- **7.1 Forholdsregler for sikker håndtering** God afstøvning.
- **Anvisninger vedrørende brand- og eksplosionsbeskyttelse:** Der kræves ingen særlige forholdsregler.
- **7.2 Betingelser for sikker opbevaring, herunder eventuel uforenelighed**
- **Opbevaring:**
- **Krav til opbevaringsrum og beholdere:** Ingen særlige krav.
- **Henvisninger vedrørende opbevaring med andre stoffer:** Ikke påkrævet.
- **Yderligere oplysninger vedrørende opbevaringsbetingelserne:** Hold beholderen tætsluttende lukket.
- **7.3 Særlige anvendelser** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 8: Eksponeringskontrol/personlige værnemidler

- **Yderligere anvisninger vedrørende udformning af tekniske anlæg:** Ingen yderligere oplysninger, se punkt 7.

· 8.1 Kontrolparametre

- **Indholdsstoffer med arbejdspladsrelaterede grænseværdier, der skal overvåges:**

1310-73-2 natriumhydroxid

GV	Loftværdi: 2 mg/m ³
L	

- **Yderligere anvisninger:** Baseret på de lister, der var gældende på tidspunktet for udarbejdelsen.

· 8.2 Eksponeringskontrol

· Personlige værnemidler:

- **Generelle forholdsregler vedrørende beskyttelse og hygiejne:**

Skal holdes borte fra føde- og drikkevarer og foderstoffer.
Forurenet, gennemvædet tøj skal det tages af med det samme.
Vask hænder inden der holdes pause og ved arbejdsophør.

Undgå kontakt med øjne og hud.

- **Åndedrætsværn:** Ikke påkrævet.

· Håndbeskyttelse:



Beskyttelseshandsker

Handskematerialet skal være uigennemtrængeligt og kunne tåle produktet/stoffet/præparatet.

(Fortsættes på side 4)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

Handelsnavn: natriumhydroxid

(Fortsat fra side 3)

På grund af manglende tests kan der ikke anbefales noget handskemateriale til produktet/præparatet/kemikalieblandingen.

Ved valg af handskematerialet skal der tages højde for gennemtrængningstider, permeabilitetstal og nedbrydning.

- **Handskemateriale:**

Valg af en egnet handske afhænger ikke blot af materialet, men også af yderligere kvalitetskriterier og er forskelligt fra den ene fabrikant til den anden.

- **Handskematerialets gennemtrængningstid**

Hos handskefabrikanten skal man forespørge om den nøjagtige gennemtrængningstid og overholde denne.

- **Øjenbeskyttelse:**



Tætsluttende beskyttelsesbriller

PUNKT 9: Fysiske og kemiske egenskaber

- **9.1 Oplysninger om grundlæggende fysiske og kemiske egenskaber**

- **Generelle oplysninger**

- **Udseende:**

Form: Pellets

Farve: Hvid

- **Lugt:** Lugtfri

- **Lugttærskel:** Ikke bestemt.

- **pH-værdi:** Ikke relevant.

- **Tilstandsændring**

Smeltepunkt/smelteområde 318 °C

Kogepunkt/kogeområde 1390 °C

- **Flammepunkt:** Ikke relevant.

- **Antændelighed (fast, i luftform):** Stoffet er ikke antændeligt.

- **Antændelsepunkt:**

Nedbrydningstemperatur: Ikke bestemt.

- **Selvantændelighed:** Ikke bestemt.

- **Ekspløsningsfare:** Produktet er ikke eksplosivt.

- **Ekspløsningsgrænser:**

Nedre: Ikke bestemt.

Øvre: Ikke bestemt.

- **Damptryk ved 800 °C:** 3,5 hPa

- **Densitet ved 20 °C:** 2,13 g/cm³

- **Relativ densitet** Ikke bestemt.

- **Damptæthed** Ikke relevant.

- **Fordampningshastighed** Ikke relevant.

- **Opløselighed i/blandbarhed med**

vand ved 20 °C: 420 g/l

- **Fordelelingskoefficient (n-octanol/vand):** Ikke bestemt.

(Fortsættes på side 5)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

Handelsnavn: natriumhydroxid

(Fortsat fra side 4)

- **Viskositet:**
- dynamisk:** Ikke relevant.
- kinematisk:** Ikke relevant.
- **9.2 Andre oplysninger** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Der står ingen yderligere, relevante informationer til rådighed.
- **10.2 Kemisk stabilitet**
- **Termisk nedbrydning/forhold, der bør undgås** Ingen nedbrydning ved formålsbestemt brug.
- **10.3 Risiko for farlige reaktioner** Der er ikke kendskab til nogen farlige reaktioner.
- **10.4 Forhold, der skal undgås** Der står ingen yderligere, relevante informationer til rådighed.
- **10.5 Materialer, der skal undgås:** Der står ingen yderligere, relevante informationer til rådighed.
- **10.6 Farlige nedbrydningsprodukter:** Der er ikke kendskab til nogen farlige nedbrydningsprodukter.

PUNKT 11: Toksikologiske oplysninger

- **11.1 Oplysninger om toksikologiske virkninger**
- **Akut toksicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

- **Klassificeringsrelevante LD/LC50-værdier:**

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- **Primær irritationsvirkning:**
- **Hudætsning/-irritation**
Forårsager svære forbrændinger af huden og øjenskader.
- **Alvorlig øjenskade/øjenirritation**
Forårsager alvorlig øjenskade.
- **Respiratorisk sensibilisering eller hudsensibilisering**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **CMR-virkninger (kræftfremkaldende egenskaber, mutagenicitet og reproduktionstoksicitet)**
- **Kimcellemutagenicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Kræftfremkaldende egenskaber**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Reproduktionstoksicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Enkel STOT-eksponering**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Gentagne STOT-eksponeringer**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Aspirationsfare**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

PUNKT 12: Miljøoplysninger

- **12.1 Toksicitet**
- **Toksicitet i vand:** Der står ingen yderligere, relevante informationer til rådighed.
- **12.2 Persistens og nedbrydelighed** Der står ingen yderligere, relevante informationer til rådighed.
- **12.3 Bioakkumuleringspotentialer** Der står ingen yderligere, relevante informationer til rådighed.

(Fortsættes på side 6)

DK

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

Handelsnavn: natriumhydroxid


(Fortsat fra side 5)

- **12.4 Mobilitet i jord** Der står ingen yderligere, relevante informationer til rådighed.
- **Yderligere økologiske oplysninger:**
- **Generelle anvisninger:**
Fareklasse for vand 1 (klassificering ifølge listen): svagt vandforurenende
Må ikke udledes i grundvandet, vandløb eller kloaksystemet ufortyndet eller i større mængder.
Må ikke udledes ufortyndet eller unneutraliseret i spildevandet eller recipienten.
- **12.5 Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.
- **12.6 Andre negative virkninger** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 13: Bortskaffelse

- **13.1 Metoder til affaldsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsaffald. Må ikke udledes i kloaksystemet.
- **Urensede emballager:**
- **Anbefaling:** Bortskaffes i overensstemmelse med myndighedernes forskrifter.
- **Anbefalet rengøringsmiddel:** Vand, eventuelt tilsat rengøringsmidler.

PUNKT 14: Transportoplysninger

- | | |
|---|-----------------------------------|
| · 14.1 FN-nummer | |
| · ADR, IMDG, IATA | UN1823 |
| · 14.2 UN-forsendelsesbetegnelse (UN proper shipping name) | |
| · ADR | 1823 NATRIUMHYDROXID, FAST |
| · IMDG | SODIUM HYDROXIDE, SOLID |
| · IATA | Sodium hydroxide, solid |
| · 14.3 Transportfareklasse(r) | |
| · ADR, IMDG, IATA | |
|  | |
| · klasse | 8 Ætsende stoffer |
| · Faremærkat | 8 |
| · 14.4 Emballagegruppe | |
| · ADR, IMDG, IATA | II |
| · 14.5 Miljøfarer: | Ikke relevant. |
| · 14.6 Særlige forsigtighedsregler for brugeren | Advarsel: Ætsende stoffer |
| · Kemler-tal: | 80 |
| · EMS-nummer: | 8-06 |
| · Segregation groups | Alkalis |
| · Stowage Category | A |
| · Segregation Code | SG35 Stow "separated from" acids. |
| · 14.7 Bulktransport i henhold til bilag II til MARPOL og IBC-koden | Ikke relevant. |

(Fortsættes på side 7)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.04.2016

Revision: 20.04.2016

Handelsnavn: natriumhydroxid

(Fortsat fra side 6)

· **Transport/yderligere oplysninger:**

· **ADR**

· **Begrænsede mængder (LQ)**

1 kg

· **Undtagne mængder (EQ)**

Kode: E2

Største tilladte nettomængde pr. indvendig emballage: 30 g

Største tilladte nettomængde pr. ydre emballage: 500 g

· **Transportkategori**

2

· **Tunnelrestriktionskode**

E

· **IMDG**

· **Limited quantities (LQ)**

1 kg

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· **UN "Model Regulation":**

UN 1823 NATRIUMHYDROXID, FAST, 8, II

PUNKT 15: Oplysninger om regulering

· **15.1 Særlige bestemmelser/særlig lovgivning for stoffet eller blandingen med hensyn til sikkerhed, sundhed og miljø**

· **Direktiv 2012/18/EU**

· **Navngivne farlige stoffer - BILAG I** Stoffet er ikke optaget i listen.

· **Nationale forskrifter:**

· **MAL-Code:** 00-4

· **15.2 Kemikaliesikkerhedsvurdering:** Der er ikke udført kemikaliesikkerhedsvurdering.

PUNKT 16: Andre oplysninger

Alle ovenstående angivelser er baseret på vores aktuelle viden, udgør dog ikke nogen tilsikring af produktgenskaber og stifter heller ikke noget kontraktligt retsforhold.

· **Forkortelser og akronymer:**

ADR: Accord européen sur le transport 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)

Måleteknisk Arbejdshygiejnisk Luftbehov

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

· 1.1 Productidentificatie

· **Handelsnaam:** natriumhydroxide

· **Artikelnummer:** 21160, 21162, 21160-sp

· **CAS-nummer:**

1310-73-2

· **EC-nummer:**

215-185-5

· **Catalogusnummer:**

011-002-00-6

· **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**

Geen verdere relevante informatie verkrijgbaar.

· **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën

· **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**

· **Fabrikant/leverancier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: info@aurion.nl

· **Inlichtinggevendende sector:** Product safety department

· **1.4 Telefoonnummer voor noodgevallen:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

· **2.1 Indeling van de stof of het mengsel**

· **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS05 corrosie

Met. Corr.1 H290 Kan bijtend zijn voor metalen.

Skin Corr. 1A H314 Veroorzaakt ernstige brandwonden en oogletsel.

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.

· **2.2 Etiketteringselementen**

· **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**

De stof product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

Handelsnaam: natriumhydroxide

(Vervolg van blz. 1)

· Gevarenpictogrammen



GHS05

· Signaalwoord Gevaar

· Gevarenaanduidingen

H290 Kan bijtend zijn voor metalen.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

· Veiligheidsaanbevelingen

P303+P361+P353 **BIJ CONTACT MET DE HUID (of het haar):** verontreinigde kleding onmiddellijk uittrekken.
Huid met water afspoelen/afdouchen.

P305+P351+P338 **BIJ CONTACT MET DE OGEN:** voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.

P321 Specifieke behandeling vereist (zie op dit etiket).

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· 2.3 Andere gevaren

· Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

· 3.1 Chemische karakterisering: Stoffen

· CAS-Nr. omschrijving

1310-73-2 natriumhydroxide

· Identificatienummer(s)

· **EC-nummer:** 215-185-5

· **Catalogusnummer:** 011-002-00-6

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· **Algemene informatie:** Verontreinigde kleding onmiddellijk uittrekken.

· **Na het inademen:** Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.

· **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.

· **Na inslikken:** Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.

· **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling

Geen verdere relevante informatie verkrijgbaar.

NL

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

Handelsnaam: natriumhydroxide

(Vervolg van blz. 2)

RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:**
CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- **6.2 Milieuvoorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**
Neutralisatiemiddel gebruiken.
Besmet materiaal zoals afval volgens punt 13 verwijderen.
Voor voldoende ventilatie zorgen.
- **6.4 Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel** Goed stofvrij maken.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:** Vervalt.
- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:** Niet noodzakelijk.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

Handelsnaam: natriumhydroxide

(Vervolg van blz. 3)

- **Handbescherming:**



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

- **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant.

- **Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**

- **Algemene gegevens**

- **Voorkomen:**

Vorm:	Pellets
Kleur:	Wit
Reuk:	Reukloos
Geurdrempelwaarde:	Niet bepaald.

- **pH-waarde:** Niet bruikbaar.

- **Toestandsverandering**

Smeltpunt/smeltbereik:	318 °C
Kookpunt/kookpuntbereik:	1390 °C

- **Vlampunt:** Niet bruikbaar.

- **Ontvlambaarheid (vast, gasvormig):** De stof is niet ontvlambaar.

- **Ontstekingstemperatuur:**

Ontbindingstemperatuur: Niet bepaald.

- **Zelfonsteking:** Niet bepaald.

- **Ontploffingsgevaar:** Het produkt is niet ontploffingsgevaarlijk.

- **Ontploffingsgrenzen:**

Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.

- **Dampspanning bij 800 °C:** 3.5 hPa

Dichtheid bij 20 °C:	2.13 g/cm ³
Relatieve dichtheid	Niet bepaald.
Dampdichtheid	Niet bruikbaar.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

Handelsnaam: natriumhydroxide

(Vervolg van blz. 4)

- | | |
|---|---|
| · Verdampingssnelheid | Niet bruikbaar. |
| · Oplosbaarheid in/mengbaarheid met Water bij 20 °C: | 420 g/l |
| · Verdelingscoëfficiënt (n-octanol/water): | Niet bepaald. |
| · Viscositeit | |
| Dynamisch: | Niet bruikbaar. |
| Kinematisch: | Niet bruikbaar. |
| · 9.2 Overige informatie | Geen verdere relevante informatie verkrijgbaar. |

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· Indelingsrelevantie LD/LC50-waarden:

Oraal	LD50	2000 mg/kg (rat)
-------	------	------------------

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**
Veroorzaakt ernstige brandwonden en oogletsel.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

Handelsnaam: natriumhydroxide


(Vervolg van blz. 5)

- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL) 10: Kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.
Gevaar voor water klasse 1 (D) (Lijstclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|---|-----------------------------------|
| · 14.1 VN-nummer | |
| · ADR, IMDG, IATA | UN1823 |
| · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN | |
| · ADR | 1823 NATRIUMHYDROXIDE, VAST |
| · IMDG | SODIUM HYDROXIDE, SOLID |
| · IATA | Sodium hydroxide, solid |
| · 14.3 Transportgevaarenklasse(n) | |
| · ADR, IMDG, IATA | |
|  | |
| · klasse | 8 Bijtende stoffen |
| · Etiket | 8 |
| · 14.4 Verpakkingsgroep: | |
| · ADR, IMDG, IATA | II |
| · 14.5 Milieugevaren: | Niet bruikbaar. |
| · 14.6 Bijzondere voorzorgen voor de gebruiker | Waarschuwing: Bijtende stoffen |
| · Kemler-getal: | 80 |
| · EMS-nummer: | 8-06 |
| · Segregation groups | Alkalisch |
| · Stowage Category | A |
| · Segregation Code | SG35 Stow "separated from" acids. |
| · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | Niet bruikbaar. |

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.04.2016

Herziening van: 20.04.2016

Handelsnaam: natriumhydroxide

(Vervolg van blz. 6)

· **Transport/verdere gegevens:**

· **ADR**

· **Beperkte hoeveelheden (LQ)**

1 kg

· **Uitgezonderde hoeveelheden (EQ)**

Code: E2

Grootste netto hoeveelheid per binnenverpakking: 30 g

Grootste netto hoeveelheid per buitenverpakking: 500 g

· **Vervoerscategorie**

2

· **Tunnelbeperkingscode**

E

· **IMDG**

· **Limited quantities (LQ)**

1 kg

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· **VN "Model Regulation":**

UN 1823 NATRIUMHYDROXIDE, VAST, 8, II

RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**
- **SZW-lijst van kankerverwekkende stoffen** De stof is niet aanwezig.
- **SZW-lijst van mutagene stoffen** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding** De stof is niet aanwezig.
- **Richtlijn 2012/18/EU**
- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** De stof is niet aanwezig.
- **Nationale voorschriften:**
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 10: Saneringsinspanning A
- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Afkortingen en acroniemen:**

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** hydroxyde de sodium
- **Code du produit:** 21160, 21162, 21160-sp
- **No CAS:**
1310-73-2
- **Numéro CE:**
215-185-5
- **Numéro index:**
011-002-00-6
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS05 corrosion

Met. Corr.1 H290 Peut être corrosif pour les métaux.

Skin Corr. 1A H314 Provoque des brûlures de la peau et des lésions oculaires graves.

Eye Dam. 1 H318 Provoque des lésions oculaires graves.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** La substance est classifiée et étiquetée selon le règlement CLP.
- **Pictogrammes de danger**



GHS05

- **Mention d'avertissement** Danger
- **Mentions de danger**
H290 Peut être corrosif pour les métaux.
H314 Provoque des brûlures de la peau et des lésions oculaires graves.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

Nom du produit: hydroxyde de sodium

(suite de la page 1)

· **Conseils de prudence**

P303+P361+P353 **EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux):** Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.

P305+P351+P338 **EN CAS DE CONTACT AVEC LES YEUX:** rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

P321 Traitement spécifique (voir sur cette étiquette).

P405 Garder sous clef.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

· **2.3 Autres dangers**

· **Résultats des évaluations PBT et vPvB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· **3.1 Caractérisation chimique: Substances**

· **No CAS Désignation**

1310-73-2 hydroxyde de sodium

· **Code(s) d'identification**

· **Numéro CE:** 215-185-5

· **Numéro index:** 011-002-00-6

RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Remarques générales:** Enlever immédiatement les vêtements contaminés par le produit.

· **Après inhalation:** En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.

· **Après ingestion:** Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**

· **Moyens d'extinction:**

CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

· **5.3 Conseils aux pompiers**

· **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

FR

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

Nom du produit: hydroxyde de sodium

(suite de la page 2)

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **6.2 Précautions pour la protection de l'environnement:**
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**
Utiliser un neutralisant.
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
Assurer une aération suffisante.
- **6.4 Référence à d'autres rubriques**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger** Bien dépoussiérer.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

- **8.1 Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

1310-73-2 hydroxyde de sodium

VME	Valeur à long terme: 2 mg/m ³
-----	--

- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

- **8.2 Contrôles de l'exposition**

- **Equipement de protection individuel:**

- **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Eviter tout contact avec les yeux et avec la peau.

- **Protection respiratoire:** N'est pas nécessaire.

- **Protection des mains:**



Gants de protection

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

Nom du produit: hydroxyde de sodium

(suite de la page 3)

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

Le choix de gants appropriés ne dépend pas seulement du matériau, mais également d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre.

· **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

Forme: Pastilles

Couleur: Blanc

· **Odeur:** Inodore

· **Seuil olfactif:** Non déterminé.

· **valeur du pH:** Non applicable.

· **Changement d'état**

Point de fusion: 318 °C

Point d'ébullition: 1390 °C

· **Point d'éclair** Non applicable.

· **Inflammabilité (solide, gazeux):** La substance n'est pas inflammable.

· **Température d'inflammation:**

Température de décomposition: Non déterminé.

· **Auto-inflammation:** Non déterminé.

· **Danger d'explosion:** Le produit n'est pas explosif.

· **Limites d'explosion:**

Inférieure: Non déterminé.

Supérieure: Non déterminé.

· **Pression de vapeur à 800 °C:** 3.5 hPa

· **Densité à 20 °C:** 2.13 g/cm³

· **Densité relative** Non déterminé.

· **Densité de vapeur.** Non applicable.

· **Vitesse d'évaporation** Non applicable.

· **Solubilité dans/miscibilité avec**

l'eau à 20 °C: 420 g/l

· **Coefficient de partage (n-octanol/eau):** Non déterminé.

(suite page 5)

FR

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

Nom du produit: hydroxyde de sodium

(suite de la page 4)

- **Viscosité:**
 - Dynamique:** Non applicable.
 - Cinématique:** Non applicable.
- **9.2 Autres informations** Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· Valeurs LD/LC50 déterminantes pour la classification:

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque des brûlures de la peau et des lésions oculaires graves.
- **Lésions oculaires graves/irritation oculaire**
Provoque des lésions oculaires graves.
- **Sensibilisation respiratoire ou cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

Nom du produit: hydroxyde de sodium


(suite de la page 5)

- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (classification selon liste): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

RUBRIQUE 14: Informations relatives au transport

- | | |
|---|-----------------------------------|
| 14.1 Numéro ONU | UN1823 |
| ADR, IMDG, IATA | |
| 14.2 Désignation officielle de transport de l'ONU | 1823 HYDROXYDE DE SODIUM SOLIDE |
| ADR | SODIUM HYDROXIDE, SOLID |
| IMDG | Sodium hydroxide, solid |
| IATA | |
| 14.3 Classe(s) de danger pour le transport | |
| ADR, IMDG, IATA | |
|  | |
| Classe | 8 Matières corrosives. |
| Étiquette | 8 |
| 14.4 Groupe d'emballage | II |
| ADR, IMDG, IATA | |
| 14.5 Dangers pour l'environnement: | Non applicable. |
| 14.6 Précautions particulières à prendre par l'utilisateur | Attention: Matières corrosives. |
| Indice Kemler: | 80 |
| No EMS: | 8-06 |
| Segregation groups | Alkalis |
| Stowage Category | A |
| Segregation Code | SG35 Stow "separated from" acids. |

(suite page 7)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.04.2016

Révision: 20.04.2016

Nom du produit: hydroxyde de sodium

(suite de la page 6)

· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR	
· Quantités limitées (LQ)	1 kg
· Quantités exceptées (EQ)	Code: E2 Quantité maximale nette par emballage intérieur: 30 g Quantité maximale nette par emballage extérieur: 500 g
· Catégorie de transport	2
· Code de restriction en tunnels	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· "Règlement type" de l'ONU:	UN 1823 HYDROXYDE DE SODIUM SOLIDE, 8, II

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** la substance n'est pas comprise
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

- **Acronymes et abréviations:**
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Met. Corr.1: Corrosive to metals, Hazard Category 1
 Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

· **1.1 Produktidentifikator**

- **Handelsname:** Natriumhydroxid
- **Artikelnummer:** 21160, 21162, 21160-sp
- **CAS-Nummer:**
1310-73-2
- **EG-Nummer:**
215-185-5
- **Indexnummer:**
011-002-00-6

· **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**

Keine weiteren relevanten Informationen verfügbar.

- **Verwendung des Stoffes / des Gemisches** Laborchemikalien

· **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**

· **Hersteller/Lieferant:**

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany
Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

24h Giftnotruf Munchen: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, Munchen. - www.toxinfo.org

- **Auskunftgebender Bereich:** Product safety department

· **1.4 Notrufnummer:**

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

· **2.1 Einstufung des Stoffs oder Gemischs**

- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS05 Ätzwirkung

Met. Corr.1 H290 Kann gegenüber Metallen korrosiv sein.

Skin Corr. 1A H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1 H318 Verursacht schwere Augenschäden.

· **2.2 Kennzeichnungselemente**

- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**

Der Stoff ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 1)

· Gefahrenpiktogramme



GHS05

· Signalwort Gefahr

· Gefahrenhinweise

H290 Kann gegenüber Metallen korrosiv sein.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

· Sicherheitshinweise

P303+P361+P353 **BEI BERÜHRUNG MIT DER HAUT (oder dem Haar):** Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen/duschen.

P305+P351+P338 **BEI KONTAKT MIT DEN AUGEN:** Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.1 Chemische Charakterisierung: Stoffe

· CAS-Nr. Bezeichnung

1310-73-2 Natriumhydroxid

· Identifikationsnummer(n)

· **EG-Nummer:** 215-185-5

· **Indexnummer:** 011-002-00-6

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

· **Allgemeine Hinweise:** Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.

· **Nach Einatmen:** Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

· **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.

· Nach Augenkontakt:

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

· **Nach Verschlucken:** Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.

· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

· 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

DE

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 2)

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:**
CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **6.2 Umweltschutzmaßnahmen:** Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Neutralisationsmittel anwenden.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung** Gute Entstaubung.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**

· Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:
--

1310-73-2 Natriumhydroxid

MAK vgl.Abschn.IIb

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 3)

- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
*Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
 Beschmutzte, getränkte Kleidung sofort ausziehen.
 Vor den Pausen und bei Arbeitsende Hände waschen.
 Berührung mit den Augen und der Haut vermeiden.*
- **Atemschutz:** Nicht erforderlich.
- **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

- **Handschuhmaterial**
Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich.
- **Durchdringungszeit des Handschuhmaterials**
Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.
- **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

- **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

- **Allgemeine Angaben**

- **Aussehen:**

Form: Pellets

Farbe: Weiß

- **Geruch:** Geruchlos

- **Geruchsschwelle:** Nicht bestimmt.

- **pH-Wert:** Nicht anwendbar.

- **Zustandsänderung**

Schmelzpunkt/Schmelzbereich: 318 °C

Siedepunkt/Siedebereich: 1390 °C

- **Flammpunkt:** Nicht anwendbar.

- **Entzündlichkeit (fest, gasförmig):** Der Stoff ist nicht entzündlich.

- **Zündtemperatur:**

Zersetzungstemperatur: Nicht bestimmt.

- **Selbstentzündlichkeit:** Nicht bestimmt.

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 4)

· Explosionsgefahr:	Das Produkt ist nicht explosionsgefährlich.
· Explosionsgrenzen:	
Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.
· Dampfdruck bei 800 °C:	3.5 hPa
· Dichte bei 20 °C:	2.13 g/cm ³
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht anwendbar.
· Verdampfungsgeschwindigkeit	Nicht anwendbar.
· Löslichkeit in / Mischbarkeit mit Wasser bei 20 °C:	420 g/l
· Verteilungskoeffizient (n-Octanol/Wasser):	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht anwendbar.
Kinematisch:	Nicht anwendbar.
· 9.2 Sonstige Angaben	Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

· **Einstufungsrelevante LD/LC50-Werte:**

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenschäden.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 5)

- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.


ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 1 (Listeneinstufung): schwach wassergefährdend
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | <p>UNI1823</p> |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG · IATA | <p>1823 NATRIUMHYDROXID, FEST
SODIUM HYDROXIDE, SOLID
Sodium hydroxide, solid</p> |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA | |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Klasse · Gefahrzettel | <p>8 Ätzende Stoffe
8</p> |

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 6)

· 14.4 Verpackungsgruppe · ADR, IMDG, IATA	II
· 14.5 Umweltgefahren:	<i>Nicht anwendbar.</i>
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Kemler-Zahl: · EMS-Nummer: · Segregation groups · Stowage Category · Segregation Code	Achtung: Ätzende Stoffe 80 8-06 Alkalis A SG35 Stow "separated from" acids.
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	<i>Nicht anwendbar.</i>
· Transport/weitere Angaben:	
· ADR · Begrenzte Menge (LQ) · Freigestellte Mengen (EQ)	<i>1 kg</i> <i>Code: E2</i> <i>Höchste Nettomenge je Innenverpackung: 30 g</i> <i>Höchste Nettomenge je Außenverpackung: 500 g</i>
· Beförderungskategorie · Tunnelbeschränkungscode	<i>2</i> <i>E</i>
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	<i>1 kg</i> <i>Code: E2</i> <i>Maximum net quantity per inner packaging: 30 g</i> <i>Maximum net quantity per outer packaging: 500 g</i>
· UN "Model Regulation":	<i>UN 1823 NATRIUMHYDROXID, FEST, 8, II</i>

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Der Stoff ist nicht enthalten.
- **Nationale Vorschriften:**
- **Wassergefährdungsklasse: WGK 1 (Listeneinstufung):** schwach wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Abkürzungen und Akronyme:**

ADR: Accord européen sur le transport 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

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt
gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.04.2016

überarbeitet am: 20.04.2016

Handelsname: Natriumhydroxid

(Fortsetzung von Seite 7)

EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr. 1: Corrosive to metals, Hazard Category 1
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

-DE-

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** idrossido di sodio

· **Articolo numero:** 21160, 21162, 21160-sp

· **Numero CAS:**

1310-73-2

· **Numeri CE:**

215-185-5

· **Numero indice:**

011-002-00-6

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**

Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS05 corrosione

Met. Corr.1 H290 Può essere corrosivo per i metalli.

Skin Corr. 1A H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

Eye Dam. 1 H318 Provoca gravi lesioni oculari.

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

La sostanza è classificata ed etichettata conformemente al regolamento CLP.

(continua a pagina 2)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

Denominazione commerciale: idrossido di sodio

(Segue da pagina 1)

· Pittogrammi di pericolo

GHS05

· Avvertenza Pericolo**· Indicazioni di pericolo**

H290 Può essere corrosivo per i metalli.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

· Consigli di prudenzaP303+P361+P353 **IN CASO DI CONTATTO CON LA PELLE** (o con i capelli): togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI**: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.P310 Contattare immediatamente un **CENTRO ANTIVELENI**/un medico.

P321 Trattamento specifico (vedere su questa etichetta).

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· 2.3 Altri pericoli**· Risultati della valutazione PBT e vPvB**· **PBT**: Non applicabile.· **vPvB**: Non applicabile.**SEZIONE 3: Composizione/informazioni sugli ingredienti****· 3.1 Caratteristiche chimiche: Sostanze****· Numero CAS**

1310-73-2 idrossido di sodio

· Numeroli di identificazione· **Numeri CE**: 215-185-5· **Numero indice**: 011-002-00-6**SEZIONE 4: Misure di primo soccorso****· 4.1 Descrizione delle misure di primo soccorso**· **Indicazioni generali**: Allontanare immediatamente gli abiti contaminati dal prodotto.· **Inalazione**: Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.· **Contatto con la pelle**: Lavare immediatamente con acqua e sapone sciacquando accuratamente.· **Contatto con gli occhi**:

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.

· **Ingestione**:

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

(continua a pagina 3)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

Denominazione commerciale: idrossido di sodio

(Segue da pagina 2)

SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:**
CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **6.2 Precauzioni ambientali:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Utilizzare mezzi di neutralizzazione.
Smaltimento del materiale contaminato conformemente al punto 13.
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura** Accurata captazione delle polveri.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

1310-73-2 idrossido di sodio

TWA Limite Ceiling: 2 mg/m³

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**
Tenere lontano da cibo, bevande e foraggi.
Togliere immediatamente gli abiti contaminati.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.

(continua a pagina 4)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

Denominazione commerciale: idrossido di sodio

(Segue da pagina 3)

Evitare il contatto con gli occhi e la pelle.

- **Maschera protettiva:** Non necessario.
- **Guanti protettivi:**



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

- **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro.

- **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

- **Occhiali protettivi:**



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

- **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

- **Indicazioni generali**

- **Aspetto:**

Forma: Pellet

Colore: Bianco

- **Odore:** Inodore

- **Soglia olfattiva:** Non definito.

- **valori di pH:** Non applicabile.

- **Cambiamento di stato**

Temperatura di fusione/ambito di fusione: 318 °C

Temperatura di ebollizione/ambito di ebollizione: 1390 °C

- **Punto di infiammabilità:** Non applicabile.

- **Infiammabilità (solido, gassoso):** Sostanza non infiammabile.

- **Temperatura di accensione:**

Temperatura di decomposizione: Non definito.

- **Autoaccensione:** Non definito.

- **Pericolo di esplosione:** Prodotto non esplosivo.

- **Limiti di infiammabilità:**

Inferiore: Non definito.

Superiore: Non definito.

- **Tensione di vapore a 800 °C:** 3.5 hPa

(continua a pagina 5)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

Denominazione commerciale: idrossido di sodio

(Segue da pagina 4)

· Densità a 20 °C:	2.13 g/cm ³
· Densità relativa	Non definito.
· Densità del vapore	Non applicabile.
· Velocità di evaporazione	Non applicabile.
· Solubilità in/Miscibilità con acqua a 20 °C:	420 g/l
· Coefficiente di distribuzione (n-Octanol/acqua):	Non definito.
· Viscosità:	
Dinamica:	Non applicabile.
Cinematica:	Non applicabile.
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Valori LD/LC50 rilevanti per la classificazione:**

Orale	LD50	2000 mg/kg (rat)
-------	------	------------------

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**
Provoca gravi ustioni cutanee e gravi lesioni oculari.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca gravi lesioni oculari.
- **Sensibilizzazione respiratoria o cutanea**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

(continua a pagina 6)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

Denominazione commerciale: idrossido di sodio

(Segue da pagina 5)


SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Classif. secondo le liste): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|--------------------------------|
| · 14.1 Numero ONU | |
| · ADR, IMDG, IATA | UN1823 |
| · 14.2 Nome di spedizione dell'ONU | |
| · ADR | 1823 IDROSSIDO DI SODIO SOLIDO |
| · IMDG | SODIUM HYDROXIDE, SOLID |
| · IATA | Sodium hydroxide, solid |
| · 14.3 Classi di pericolo connesso al trasporto | |
| · ADR, IMDG, IATA | |
|  | |
| · Classe | 8 Materie corrosive |
| · Etichetta | 8 |
| · 14.4 Gruppo di imballaggio | |
| · ADR, IMDG, IATA | II |
| · 14.5 Pericoli per l'ambiente: | Non applicabile. |
| · 14.6 Precauzioni speciali per gli utilizzatori | Attenzione: Materie corrosive |
| · Numero Kemler: | 80 |
| · Numero EMS: | 8-06 |

(continua a pagina 7)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.04.2016

Revisione: 20.04.2016

Denominazione commerciale: idrossido di sodio

(Segue da pagina 6)

· Segregation groups	Alkalis
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" acids.
· 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR	
· Quantità limitate (LQ)	1 kg
· Quantità esenti (EQ)	Codice: E2 Quantità massima netta per imballaggio interno: 30 g Quantità massima netta per imballaggio esterno: 500 g
· Categoria di trasporto	2
· Codice di restrizione in galleria	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1823 IDROSSIDO DI SODIO SOLIDO, 8, II

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** La sostanza non è contenuta
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· **Abbreviazioni e acronimi:**

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20

개정: 2016.04.20

1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명:** Sodium Hydroxide
- **상품번호:** 21160, 21162, 21160-sp
- **CAS-번호**
1310-73-2
- **EC 의번호:**
215-185-5
- **색인 번호:**
011-002-00-6
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실 화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조자/수입자/유통업자 정보:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Samchang Commercial Co., Ltd.**
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
- **추가적인 정보 획득 가능:** Product safety department
- **비상연락 전화번호:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성.위험성

- **순물질 또는 혼합물의 분류**



부식

금속부식성 물질 구분1 H290 금속을 부식시킬 수 있음
 피부 부식성/자극성 구분1 H314 피부에 심한 화상과 눈에 손상을 일으킴
 심한 눈 손상/자극성 구분1 H318 눈에 심한 손상을 일으킴

- **라벨표기 요소**
- **GHS 라벨 요소**
본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



GHS05

- **신호어 위험**

(2 쪽에 계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20

개정: 2016.04.20

제품명: Sodium Hydroxide

(1 쪽부터계속)

· 유해.위험 문구

금속을 부식시킬 수 있음
피부에 심한 화상과 눈에 손상을 일으킴

· 예방조치 문구

피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 헹구시오.
눈에 물으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
즉시 독성물질센터/병원 연락 필요.
(라벨 참조) 처치를 하시오.
잠금장치가 있는 저장장소에 저장하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 기타 유해성

- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

- 화학적 특성: 화학물질
- CAS-번호표시
1310-73-2 Sodium Hydroxide
- 식별 번호
- EC 의번호: 215-185-5
- 색인 번호: 011-002-00-6

4 응급조치 요령

- 응급조치요령 내용
- 일반적 정보: 이제품에 의해 오염된 의상은 즉시 제거한다.
- 흡입했을 때: 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- 피부에 접촉했을 때: 즉시물과비누로씻고잘행군다.
- 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어내고나서, 의사와 상담한다
- 먹었을 때: 물을 충분히 마시고 신선한 공기를 쐬다. 즉시 의사의 도움을 구한다.
- 기타 의사의 주의사항:
- 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
- 즉각적인 의료처리 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발.화재시 대처방법

- 소화제
- 적절한 소화제:
이산화탄소, 진화용 석회 가루 또는 물 방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.
- 분 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처리 절차 안전장비 착용하고, 무방비 의 사람은 격리시킨다.
- 환경 관련 예방조치: 하수도망/해수면위의물/지하수로도달하지않게한다.

(3 쪽에계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20

개정: 2016.04.20

제품명: Sodium Hydroxide

(2 쪽부터 계속)

- **밀폐 및 정화 방법과 소재:**
중성제를 사용한다.
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.
- **타 섹션 참조**
안전 관리에 대한 정보는 제7 장 을 참고하시오.
개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.
쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

7 취급 및 저장방법

- **취급:**
- **안전 취급을 위한 예방조치** 철저한 먼지 제거.
- **화재 및 폭발 사고 예방대책에 관한 정보:** 특별한 조치가 필요없음.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특별한 요구사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필요없음
- **보관 조건에 관한 추가적인 정보:** 용기를 새지 않게 밀폐한 채 보관한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시오.
- **통제 변수**
- **화학물질의 노출기준, 생물학적 노출기준 등:**

1310-73-2 Sodium Hydroxide

TLV (KR)	최고노출기준: 2 mg/m ³
PEL (US)	장기간의값: 2 mg/m ³
REL (US)	최고노출기준: 2 mg/m ³
TLV (US)	최고노출기준: 2 mg/m ³

- **추 가 정보:** 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

- **노출 통제**
- **개인 보호구**
- **일반적보호조치및위생조치:**
식품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
휴식 전 이 나 작업이 끝날 때 마 다 손 을 씻 는 다.
눈 과 피 부 와 의 접 촉 은 피 한 다.
- **호흡기 보호:** 필요없음.
- **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율 과 저하를 고 려해 서 장 갑 재 료 를 선택한다.

(4 쪽에 계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20

개정: 2016.04.20

제품명: Sodium Hydroxide

(3 쪽부터계속)

- **장갑 의재료**
적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업자에따라서도다르게선정되어야한다.
- **장갑 재료 의 투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.
- **눈 보호:**



꼭조이는보안경

9 물리화학적 특성

- **기본 물리 및 화학적 특성에 대한 정보**
- **일반정보**
- **외형**
 - 물리적 상태: 겉질
 - 색: 하얀
 - 냄새: 무취의
 - 후각역치 알맞지않다.
- pH: 해당사항 없음.
- **상태변화**
 - 녹는점/어는점: 318 °C
 - 초기 끓는점과 끓는점 범위: 1390 °C
- 인화점: 해당사항 없음.
- 인화성(고체, 기체): 이제품은 가연 성 이 없다.
- **점화온도:**
- **분해 온도:** 알맞지않다.
- 자기점화: 알맞지않다.
- 폭발위험: 이제품은폭발위험성이없다
- **인화 또는 폭발 범위의 상한/하한**
 - 아래로: 알맞지않다.
 - 위로: 알맞지않다.
- 증기압 의경우 800 °C: 3.5 hPa
- 밀도 의경우 20 °C: 2.13 g/cm³
- 비중: 알맞지않다.
- 증기밀도: 해당사항 없음.
- 증발 속도: 해당사항 없음.
- 용해도:
 - 물 의경우 20 °C: 420 g/l
- n 옥탄올/물 분배계수: 알맞지않다.
- 점도:
 - 역확성: 해당사항 없음.
 - 동점성: 해당사항 없음.

(5 쪽에계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20

개정: 2016.04.20

제품명: Sodium Hydroxide

(4 쪽부터계속)

· 기타 정보

추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:

구강의 LD50 2000 mg/kg (rat)

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 피부와점막에강한부식작용.
- 심한 눈 손상 또는 자극성: 강한부식작용
- 감각화: 민감한영향이없는것으로알려져있다.
- 추가적인 독성에 관한 정보:
삼킬경우식도나위등의내장기관벽에상처를주는위험과 마찬가지로입주변이나구강에강한부식작용을한다

12 환경에 미치는 영향

- 독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보:
- 일반 특징:
수질오염등급 1 (목록분류): 약하게수질오염이된
희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
희석시키지않은채또는중화시키지않은채하수도나배수로에도달하지않게해야한다.
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.

(6 쪽에계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20


개정: 2016.04.20

제품명: Sodium Hydroxide

(5 쪽부터계속)

- 비위생적 포장:
- 권고: 당국의지침에입각한쓰레기처리.
- 추천 세정제: 경우에따라서세제가첨가된물

14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1823
· UN 적정 선적명 · ADR · IMDG · IATA	1823 SODIUM HYDROXIDE, SOLID SODIUM HYDROXIDE, SOLID Sodium hydroxide, solid
· 교통 위험 클래스 · ADR, IMDG, IATA 	8 부식작용하는물질 8
· 등급 · 위험물 라벨	8 부식작용하는물질 8
· 용기등급 · ADR, IMDG, IATA	II
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Segregation groups · Stowage Category · Segregation Code	경고: 부식작용하는물질 80 8-06 Alkalis A SG35 Stow "separated from" acids.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· 운 송/추가 정보:	
· ADR · 한정 수량 (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· 운송 구분 · 터널 제한 코드	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

(7 쪽에계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.04.20

개정: 2016.04.20

제품명: Sodium Hydroxide

(6 쪽부터계속)

· UN "모범 규제":

UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 법적 규제현황

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

· Korean Existing Chemical Inventory

1310-73-2 Sodium Hydroxide

KE-31487

· GHS 라벨 요소

본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· 그림문자



GHS05

· 신호어 위험

· 유해.위험 문구

금속을 부식시킬 수 있음

피부에 심한 화상과 눈에 손상을 일으킴

· 예방조치 문구

피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 행구시오.

눈에 룬으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.

즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하시오.

잠금장치가 있는 저장장소에 저장하시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 화학물질 안전성 평가: 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한 오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

· 최초 작성일자: 2016.04.20

· 개정 횟수 및 최종 개정일자: 1 / 2016.04.20

· 약어와 두문자어:

ADR: Accord européen sur le transport 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

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

금속부식성 물질 구분1: Corrosive to metals, Hazard Category 1

피부 부식성/자극성 구분1: Skin corrosion/irritation, Hazard Category 1

심한 눈 손상/자극성 구분1: Serious eye damage/eye irritation, Hazard Category 1

Ficha de dados de segurança
Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** hidróxido de sódio
- **Código do produto:** 21160, 21162, 21160-sp
- **Nº CAS:**
1310-73-2
- **Número CE:**
215-185-5
- **Número de índice:**
011-002-00-6
- **1.2 Utilizações identificadas relevantes da substância ou mistura e utilizações desaconselhadas**
Não existe mais nenhuma informação relevante disponível.
- **Utilização da substância / da preparação** Químicos de laboratório
- **1.3 Identificação do fornecedor da ficha de dados de segurança**
- **Fabricante/fornecedor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Entidade para obtenção de informações adicionais:** Product safety department
- **1.4 Número de telefone de emergência:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECÇÃO 2: Identificação dos perigos

- **2.1 Classificação da substância ou mistura**
- **Classificação em conformidade com o Regulamento (CE) n.º 1272/2008**



GHS05 corrosão

Met. Corr.1 H290 Pode ser corrosivo para os metais.
 Skin Corr. 1A H314 Provoca queimaduras na pele e lesões oculares graves.
 Eye Dam. 1 H318 Provoca lesões oculares graves.

- **2.2 Elementos do rótulo**
- **Rotulagem em conformidade com o Regulamento (CE) n.º 1272/2008**
A substância classificou-se e está etiquetado em conformidade com o regulamento CLP.
- **Pictogramas de perigo**



GHS05

- **Palavra-sinal Perigo**
- **Advertências de perigo**
H290 Pode ser corrosivo para os metais.
H314 Provoca queimaduras na pele e lesões oculares graves.

(continuação na página 2)

Ficha de dados de segurança

Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

Nome comercial: **hidróxido de sódio**

(continuação da página 1)

- **Recomendações de prudência**

P303+P361+P353 **SE ENTRAR EM CONTACTO COM A PELE (ou o cabelo):** retirar imediatamente toda a roupa contaminada. Enxaguar a pele com água/tomar um duche.

P305+P351+P338 **SE ENTRAR EM CONTACTO COM OS OLHOS:** enxaguar cuidadosamente com água durante vários minutos. Se usar lentes de contacto, retire-as, se tal lhe for possível. Continuar a enxaguar.

P310 Contacte imediatamente um CENTRO DE INFORMAÇÃO ANTIVENENOS/médico.

P321 Tratamento específico (ver no presente rótulo).

P405 Armazenar em local fechado à chave.

P501 Eliminar o conteúdo/recipiente de acordo com a legislação local/regional/nacional/internacional.

- **2.3 Outros perigos**

- **Resultados da avaliação PBT e mPmB**

- **PBT:** Não aplicável.

- **mPmB:** Não aplicável.

SECCÃO 3: Composição/informação sobre os componentes

- **3.1 Caracterização química: Substâncias**

- **Designação CAS n.º**

1310-73-2 hidróxido de sódio

- **Número(s) de identificação**

- **Número CE:** 215-185-5

- **Número de índice:** 011-002-00-6

SECCÃO 4: Medidas de primeiros socorros

- **4.1 Descrição das medidas de primeiros socorros**

- **Indicações gerais:** O vestuário contaminado com substâncias perigosas deve ser imediatamente removido.

- **Em caso de inalação:**

Se a vítima estiver inconsciente, posicioná-la e transportá-la com estabilidade, deitada lateralmente.

- **Em caso de contacto com a pele:** Lavar imediatamente com água e sabão e enxaguar abundantemente.

- **Em caso de contacto com os olhos:**

Enxaguar os olhos durante alguns minutos sob água corrente, mantendo as pálpebras abertas, e consultar o médico.

- **Em caso de ingestão:** Beber bastante água e respirar ar fresco. Consultar imediatamente um médico.

- **4.2 Sintomas e efeitos mais importantes, tanto agudos como retardados**

Não existe mais nenhuma informação relevante disponível.

- **4.3 Indicações sobre cuidados médicos urgentes e tratamentos especiais necessários**

Não existe mais nenhuma informação relevante disponível.

SECCÃO 5: Medidas de combate a incêndios

- **5.1 Meios de extinção**

- **Meios adequados de extinção:**

CO₂, pó extintor ou jacto de água. Um incêndio de grandes dimensões deve ser combatido com jacto de água ou espuma resistente ao álcool.

- **5.2 Perigos especiais decorrentes da substância ou mistura**

Não existe mais nenhuma informação relevante disponível.

(continuação na página 3)

Ficha de dados de segurança

Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

Nome comercial: hidróxido de sódio

(continuação da página 2)

- **5.3 Recomendações para o pessoal de combate a incêndios**
- **Equipamento especial de protecção:** Não são necessárias medidas especiais.

SECÇÃO 6: Medidas a tomar em caso de fugas acidentais

- **6.1 Precauções individuais, equipamento de protecção e procedimentos de emergência**
Usar equipamento de protecção. Manter as pessoas desprotegidas afastadas.
- **6.2 Precauções a nível ambiental:** Evitar que penetre na canalização / águas superficiais / águas subterrâneas.
- **6.3 Métodos e materiais de confinamento e limpeza:**
Aplicar um agente de neutralização.
Eliminar residualmente as substâncias contaminadas como um resíduo segundo o Ponto 13.
Assegurar uma ventilação adequada.
- **6.4 Remissão para outras secções**
Para informações sobre uma manipulação segura, ver o capítulo 7.
Para informações referentes ao equipamento de protecção individual, ver o capítulo 8.
Para informações referentes à eliminação residual, ver o capítulo 13.

SECÇÃO 7: Manuseamento e armazenagem

- **7.1 Precauções para um manuseamento seguro** Remover completamente o pó.
- **Precauções para prevenir incêndios e explosões:** Não são necessárias medidas especiais.
- **7.2 Condições de armazenagem segura, incluindo eventuais incompatibilidades**
- **Armazenagem:**
- **Requisitos para espaços ou contentores para armazenagem:** Sem requisitos especiais.
- **Avisos para armazenagem conjunta:** Não necessário.
- **Outros avisos sobre as condições de armazenagem:** Manter o recipiente hermeticamente fechado.
- **7.3 Utilização(ões) final(is) específica(s)** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 8: Controlo da exposição/Protecção individual

- **Indicações adicionais para concepção de instalações técnicas:** Não existem outras informações, ver ponto 7.

8.1 Parâmetros de controlo

- **Componentes cujo valor do limite de exposição no local de trabalho deve ser monitorizado:**

1310-73-2 hidróxido de sódio

VLE	Valor limite de exposição – concentração máxima: 2 mg/m ³ Irritação ocular, do TRS, cutânea
-----	---

- **Indicações adicionais:** Foram utilizadas como base as listas válidas à data da elaboração.

8.2 Controlo da exposição

- **Equipamento de protecção individual:**
- **Medidas gerais de protecção e higiene:**
Manter afastado de alimentos, bebidas e forragens.
Despir imediatamente a roupa contaminada e embebida.
Lavar as mãos antes das pausas e no fim do trabalho.
Evitar o contacto com os olhos e com a pele.
- **Protecção respiratória:** Não necessário.

(continuação na página 4)

Ficha de dados de segurança

Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

Nome comercial: **hidróxido de sódio**

(continuação da página 3)

· **Protecção das mãos:**

Luvas de protecção

O material das luvas tem de ser impermeável e resistente ao produto / à substância / preparação.

Uma vez que não foram realizados testes nesta área, não podemos recomendar um determinado tipo de material para as luvas que seja adequado para o produto / a preparação / a mistura de químicos.

Escolher o material das luvas tendo em consideração a durabilidade, a permeabilidade e a degradação.

· **Material das luvas**

A escolha das luvas mais adequadas não depende apenas do material, mas também de outras características qualitativas e varia de fabricante para fabricante.

· **Tempo de penetração no material das luvas**

Deve informar-se sobre a validade exacta das suas luvas junto do fabricante e respeitá-la.

· **Protecção dos olhos:**

Óculos de protecção totalmente fechados

SECÇÃO 9: Propriedades físico-químicas

· **9.1 Informações sobre propriedades físicas e químicas de base**· **Informações gerais**· **Aspecto:**

Forma:	Pellets
Cor:	Branco
Odor:	Inodoro
Limiar olfactivo:	Não classificado.

· **valor pH:** Não aplicável.· **Mudança do estado:**

Ponto / intervalo de fusão:	318 °C
Ponto / intervalo de ebulição:	1390 °C

· **Ponto de inflamação:** Não aplicável.· **Inflamabilidade (sólido, gás):** A substância não é inflamável.· **Temperatura de ignição:**

Temperatura de decomposição: Não classificado.

· **Auto-inflamabilidade:** Não classificado.· **Perigos de explosão:** O produto não corre o risco de explosão.· **Limites de explosão:**

Inferior:	Não classificado.
Superior:	Não classificado.

· **Pressão de vapor em 800 °C:** 3.5 hPa

Densidade em 20 °C:	2.13 g/cm ³
Densidade relativa	Não classificado.
Densidade de vapor	Não aplicável.

(continuação na página 5)

Ficha de dados de segurança

Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

Nome comercial: hidróxido de sódio

(continuação da página 4)

· Velocidade de evaporação	Não aplicável.
· Solubilidade em / miscibilidade com água em 20 °C:	420 g/l
· Coeficiente de distribuição (n-octanol/água):	Não classificado.
· Viscosidade:	
Dinâmico:	Não aplicável.
Cinemático:	Não aplicável.
· 9.2 Outras informações	Não existe mais nenhuma informação relevante disponível.

SECÇÃO 10: Estabilidade e reactividade

- **10.1 Reactividade** Não existe mais nenhuma informação relevante disponível.
- **10.2 Estabilidade química**
- **Decomposição térmica / condições a evitar:** Não existe decomposição se usado de acordo com as especificações.
- **10.3 Possibilidade de reações perigosas** Não se conhecem reações perigosas.
- **10.4 Condições a evitar** Não existe mais nenhuma informação relevante disponível.
- **10.5 Materiais incompatíveis:** Não existe mais nenhuma informação relevante disponível.
- **10.6 Produtos de decomposição perigosos:** Não se conhecem produtos de decomposição perigosos.

SECÇÃO 11: Informação toxicológica

- **11.1 Informações sobre os efeitos toxicológicos**
- **Toxicidade aguda** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

- **Valores LD/LC50 relevantes para a classificação:**

por via oral	LD50	2000 mg/kg (rat)
--------------	------	------------------

- **Efeito de irritabilidade primário:**
- **Corrosão/irritação cutânea**
Provoca queimaduras na pele e lesões oculares graves.
- **Lesões oculares graves/irritação ocular**
Provoca lesões oculares graves.
- **Sensibilização respiratória ou cutânea**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Efeitos CMR (carcinogenicidade, mutagenicidade e efeitos tóxicos na reprodução)**
- **Mutagenicidade em células germinativas**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Carcinogenicidade** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade reprodutiva** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição única**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição repetida**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Perigo de aspiração** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

SECÇÃO 12: Informação ecológica

- **12.1 Toxicidade**
- **Toxicidade aquática:** Não existe mais nenhuma informação relevante disponível.
- **12.2 Persistência e degradabilidade** Não existe mais nenhuma informação relevante disponível.

(continuação na página 6)

Ficha de dados de segurança
Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

Nome comercial: hidróxido de sódio

(continuação da página 5)

- **12.3 Potencial de bioacumulação** Não existe mais nenhuma informação relevante disponível.
- **12.4 Mobilidade no solo** Não existe mais nenhuma informação relevante disponível.
- **Outras indicações ecológicas:**
- **Indicações gerais:**
Classe de perigo para a água 1 (D) (classificação pelas listas): pouco perigoso para a água
Não deixar chegar substâncias concentradas, ou seja quantidades grandes, às águas subterrâneas, aos cursos de água ou à canalização.
Substâncias concentradas, ou seja não neutralizadas, não podem chegar aos esgotos nem às águas.
- **12.5 Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.
- **12.6 Outros efeitos adversos** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 13: Considerações relativas à eliminação

- **13.1 Métodos de tratamento de resíduos**
- **Recomendação:** Não se pode eliminar juntamente com o lixo doméstico. Não permita que chegue à canalização.
- **Embalagens contaminadas:**
- **Recomendação:** Eliminação residual conforme o regulamento dos serviços públicos.
- **Meio de limpeza recomendado:** Água, eventualmente com adição de produtos de limpeza

SECÇÃO 14: Informações relativas ao transporte

- | | |
|--|-----------------------------------|
| · 14.1 Número ONU | UN1823 |
| · ADR, IMDG, IATA | |
| · 14.2 Designação oficial de transporte da ONU | |
| · ADR | 1823 HIDRÓXIDO DE SÓDIO SÓLIDO |
| · IMDG | SODIUM HYDROXIDE, SOLID |
| · IATA | Sodium hydroxide, solid |
| · 14.3 Classes de perigo para efeitos de transporte | |
| · ADR, IMDG, IATA | |
| | |
| · Classe | 8 Matérias corrosivas |
| · Rótulo | 8 |
| · 14.4 Grupo de embalagem | |
| · ADR, IMDG, IATA | II |
| · 14.5 Perigos para o ambiente: | Não aplicável. |
| · 14.6 Precauções especiais para o utilizador | Atenção: Matérias corrosivas |
| · Nº Kemler: | 80 |
| · Nº EMS: | 8-06 |
| · Segregation groups | Alkalis |
| · Stowage Category | A |
| · Segregation Code | SG35 Stow "separated from" acids. |

(continuação na página 7)

Ficha de dados de segurança
Em conformidade com 1907/2006/CE, Artigo 31.º

data da impressão 20.04.2016

Revisão: 20.04.2016

Nome comercial: **hidróxido de sódio**

(continuação da página 6)

· **14.7 Transporte a granel em conformidade com o anexo II da Convenção MARPOL e o Código IBC Não aplicável.**

· **Transporte/outras informações:**

· **ADR**

· **Quantidades Limitadas (LQ)**

1 kg

· **Quantidades exceptuadas (EQ)**

Código: E2

Quantidade líquida máxima por embalagem interior: 30 g

Quantidade líquida máxima por embalagem exterior: 500 g

· **Categoria de transporte**

2

· **Código de restrição em túneis**

E

· **IMDG**

· **Limited quantities (LQ)**

1 kg

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· **UN "Model Regulation":**

UN 1823 HIDRÓXIDO DE SÓDIO SÓLIDO, 8, II

SECÇÃO 15: Informação sobre regulamentação

· **15.1 Regulamentação/legislação específica para a substância ou mistura em matéria de saúde, segurança e ambiente**

· **Diretiva 2012/18/UE**

· **Substâncias perigosas designadas - ANEXO I** A substância não está listada.

· **15.2 Avaliação da segurança química:** Não foi realizada nenhuma Avaliação de Segurança Química.

SECÇÃO 16: Outras informações

As informações fornecidas baseiam-se no estado actual dos nossos conhecimentos, embora não representem uma garantia das propriedades do produto e não fundamentam uma relação contratual.

· **Abreviaturas e acrónimos:**

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr.1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

- **Nombre comercial:** hidróxido de sodio
- **Número del artículo:** 21160, 21162, 21160-sp
- **Número CAS:**
1310-73-2
- **Número CE:**
215-185-5
- **Número de clasificación:**
011-002-00-6

· 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

No existen más datos relevantes disponibles.

- **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Aname

C/ Perez Galdos no. 2
28693 Quijorna
Madrid, Spain
Tel: +34.91.816.89.50
Fax: +34.91.816.85.94
email: ventas@aname.es

- **Área de información:** Product safety department

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

- **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS05 corrosión

Met. Corr.1 H290 Puede ser corrosivo para los metales.

Skin Corr. 1A H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

Eye Dam. 1 H318 Provoca lesiones oculares graves.

· 2.2 Elementos de la etiqueta

- **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

La sustancia se ha clasificado y etiquetado de conformidad con el reglamento CLP.

(se continua en página 2)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 1)

· **Pictogramas de peligro**

GHS05

· **Palabra de advertencia Peligro**· **Indicaciones de peligro**

H290 Puede ser corrosivo para los metales.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

· **Consejos de prudencia**

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ ducharse.

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.

P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.

P321 Se necesita un tratamiento específico (ver en esta etiqueta).

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· **2.3 Otros peligros**· **Resultados de la valoración PBT y mPmB**· **PBT:** No aplicable.· **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· **3.1 Caracterización química: Sustancias**· **Denominación N° CAS**

1310-73-2 hidróxido de sodio

· **Número(s) de identificación**· **Número CE:** 215-185-5· **Número de clasificación:** 011-002-00-6

SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**· **Instrucciones generales:** Quitarse de inmediato toda prenda contaminada con el producto.· **En caso de inhalación del producto:**

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.· **En caso de con los ojos:**

Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.

· **En caso de ingestión:** Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.· **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.· **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**

No existen más datos relevantes disponibles.

ES

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 2)

SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:**
CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**
Utilizar un neutralizador.
Desechar el material contaminado como vertido según ítem 13.
Asegurar suficiente ventilación.
- **6.4 Referencia a otras secciones**
Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura** Desempolvar cuidadosamente.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

- **8.1 Parámetros de control**

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

1310-73-2 hidróxido de sodio

LEP	Valor de corta duración: 2 mg/m ³
-----	--

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 3)

- **8.2 Controles de la exposición**
- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**
Mantener alejado de alimentos, bebidas y alimentos para animales.
Quitarse de inmediato la ropa ensuciada o impregnada.
Lavarse las manos antes de las pausas y al final del trabajo.
Evitar el contacto con los ojos y la piel.
- **Protección respiratoria:** No es necesario.
- **Protección de manos:**



Guantes de protección

- El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.
Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.
Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.
- **Material de los guantes**
La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro.
 - **Tiempo de penetración del material de los guantes**
El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.
 - **Protección de ojos:**



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:	Pellets
Color:	Blanco
Olor:	Inodoro
Umbral olfativo:	No determinado.

· **valor pH:** No aplicable.

· Cambio de estado

Punto de fusión /campo de fusión:	318 °C
Punto de ebullición /campo de ebullición:	1390 °C

· **Punto de inflamación:** No aplicable.

· **Inflamabilidad (sólido, gaseiforme):** La sustancia no es inflamable.

· Temperatura de ignición:

Temperatura de descomposición: No determinado.

· **Autoinflamabilidad:** No determinado.

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 4)

· Peligro de explosión:	El producto no es explosivo.
· Límites de explosión:	
Inferior:	No determinado.
Superior:	No determinado.
· Presión de vapor a 800 °C:	3.5 hPa
· Densidad a 20 °C:	2.13 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No aplicable.
· Velocidad de evaporación	No aplicable.
· Solubilidad en / miscibilidad con agua a 20 °C:	420 g/l
· Coeficiente de reparto (n-octanol/agua):	No determinado.
· Viscosidad:	
Dinámica:	No aplicable.
Cinemática:	No aplicable.
· 9.2 Otros datos	No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- 10.1 Reactividad No existen más datos relevantes disponibles.
- 10.2 Estabilidad química
- Descomposición térmica / condiciones que deben evitarse: No se descompone al emplearse adecuadamente.
- 10.3 Posibilidad de reacciones peligrosas No se conocen reacciones peligrosas.
- 10.4 Condiciones que deben evitarse No existen más datos relevantes disponibles.
- 10.5 Materiales incompatibles: No existen más datos relevantes disponibles.
- 10.6 Productos de descomposición peligrosos: No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- 11.1 Información sobre los efectos toxicológicos
- Toxicidad aguda A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

- Efecto estimulante primario:
- Corrosión o irritación cutáneas
Provoca quemaduras graves en la piel y lesiones oculares graves.
- Lesiones o irritación ocular graves
Provoca lesiones oculares graves.
- Sensibilización respiratoria o cutánea
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)
- Mutagenicidad en células germinales
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- Carcinogenicidad A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- Toxicidad para la reproducción A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- Toxicidad específica en determinados órganos (STOT) – exposición única
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 5)

- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.


SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (clasificación de listas): escasamente peligroso para el agua
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1823
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 1823 HIDRÓXIDO SÓDICO SÓLIDO
- **IMDG** SODIUM HYDROXIDE, SOLID
- **IATA** Sodium hydroxide, solid
- **14.3 Clase(s) de peligro para el transporte**
- **ADR, IMDG, IATA**
- 
- **Clase** 8 Materias corrosivas
- **Etiqueta** 8

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 6)

· 14.4 Grupo de embalaje	II
· ADR, IMDG, IATA	
· 14.5 Peligros para el medio ambiente:	No aplicable.
· 14.6 Precauciones particulares para los usuarios	Atención: Materias corrosivas
· Número Kemler:	80
· Número EMS:	8-06
· Segregation groups	Alkalis
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" acids.
· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR	
· Cantidades limitadas (LQ)	1 kg
· Cantidades exceptuadas (EQ)	Código: E2 Cantidad neta máxima por envase interior: 30 g Cantidad neta máxima por embalaje exterior: 500 g
· Categoría de transporte	2
· Código de restricción del túnel	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· "Reglamentación Modelo" de la UNECE:	UN 1823 HIDRÓXIDO SÓDICO SÓLIDO, 8, II

SECCIÓN 15: Información reglamentaria

- 15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla
- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I No contiene la sustancia.
- 15.2 Evaluación de la seguridad química: Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· Abreviaturas y acrónimos:

ADR: Accord européen sur le transport 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic

(se continua en página 8)

Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

fecha de impresión 20.04.2016

Revisión: 20.04.2016

Nombre comercial: hidróxido de sodio

(se continua en página 7)

vPvB: very Persistent and very Bioaccumulative
Met. Corr. 1: Corrosive to metals, Hazard Category 1
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

ES

Güvenlik Bilgi Formu

1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016

Bölüm 1: Maddenin/karışımın ve şirketin/dağıtıcının kimliği

- **1.1 Madde/Karışım kimliği**
- **Ticari adı: Sodyum hidroksit**
- **Mal numarası: 21160, 21162, 21160-sp**
- **CAS - numarası:**
1310-73-2
- **EC Numarası:**
215-185-5
- **AT - numarası:**
011-002-00-6
- **1.2 Madde veya karışımın belirlenmiş kullanımları ve tavsiye edilmeyen kullanımları**
Daha başka önemli bilgi mevcut değildir.
- **Maddenin Kullanımı / Hazırlanması** Laboratuarda kullanılan kimyasal maddeler
- **1.3 Güvenlik bilgi formu tedarikçisinin bilgileri**
- **Üretici / Teslimatı yapan:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Güvenlik hakkında bilgiler veren kesim: Product safety department**
- **1.4 Acil durum telefon numarası**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

Bölüm 2: Zararlılık tanımlanması

- **2.1 Madde veya karışımın sınıflandırılması**
- **Düzenlemeye göre sınıflandırma (EC) No 1272/2008**



GHS05 Aşınma

Met. Corr.1 H290 Metalleri aşındırabilir.
Skin Corr. 1A H314 Ciddi cilt yanıklarına ve göz hasarına yol açar.
Eye Dam. 1 H318 Ciddi göz hasarına yol açar.

- **2.2 Etiket unsurları**
- **Yönetmelik (EC) No 1272/2008'e göre etiketleme**
Madde SEA yönetmeliğine göre sınıflandırılmış ve etiketlenmiştir.
- **Zararlılık İşaretleri**



GHS05

- **Uyarı Kelimesi Tehlike**
- **Zararlılık İfadesi**
H290 Metalleri aşındırabilir.
H314 Ciddi cilt yanıklarına ve göz hasarına yol açar.

(Devamı sayfa 2 'da)

Güvenlik Bilgi Formu

1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016

Ticari adı: Sodyum hidroksit

(Sayfa 1 'nin devamı)

· Önlem İfadesi

P303+P361+P353 **CİLDE (veya saça) TEMAS EDERSE:** Bulaşmış bütün giysileri derhal çıkarın. Cildi suyla çalkalayın/duş alın.

P305+P351+P338 **GÖZ İLE TEMASI HALİNDE:** Su ile birkaç dakika dikkatlice durulayın. Takılı ve yapması kolaysa, kontak lensleri çıkartın. Durulamaya devam edin.

P310 **Hemen ULUSAL ZEHİR DANIŞMA MERKEZİNİN 114 NOLU TELEFONUNU/doktoru arayın.**

P321 **Özel müdahale gerekli (etikete bakın)**

P405 **Kilit altında saklayın.**

P501 **İçeriği/kabı yerel/bölgesel/ulusal/uluslararası mevzuata uygun şekilde bertaraf edin.**

· 2.3 Diğer zararlar**· PBT ve vPvB değerlendirmesi sonuçları****· PBT:** Uygulanamaz.**· vPvB:** Uygulanamaz.**Bölüm 3: Bileşimi/İçindekiler hakkında bilgi****· 3.1 Maddeler****· CAS-No. tanımı**

1310-73-2 Sodyum hidroksit

· Teşhis numarası**· EC Numarası:** 215-185-5**· AT - numarası:** 011-002-00-6**Bölüm 4: İlk yardım önlemleri****· 4.1 İlk yardım önlemlerinin açıklaması****· Genel uyarılar:** Ürünün bulaşmış olduğu giyim eşyalarını derhal uzaklaştırınız.**· Teneffüs ettikten sonra:** Baygınlık halinde yatırılması ve taşınması sabit yan pozisyonda olmalıdır.**· Cilde temas ettikten sonra:** Derhal su ve sabunla yıkayarak iyice durulayınız.**· Gözlere temas ettikten sonra:**

Gözleri, gözkapakları açık bir şekilde birkaç dakika süreyle akan suyun altına tutunuz ve doktora başvurunuz.

· Yuttuktan sonra: Bolca su içiniz ve temiz hava alınız. Derhal doktor çağrınız.**· 4.2 Akut ve sonradan görülen önemli belirtiler ve etkiler** Daha başka önemli bilgi mevcut değildir.**· 4.3 Tıbbi müdahale ve özel tedavi gereği için ilk işaretler** Daha başka önemli bilgi mevcut değildir.**Bölüm 5: Yangınla mücadele önlemleri****· 5.1 Yangın söndürücüler****· Elverişli söndürücü maddeler:**CO₂, söndürme tozu ya da püskürtme su. Daha büyük yangınlarla püskürtme su ve alkole mukavim köpükle mücadele ediniz.**· 5.2 Madde veya karışımdan kaynaklanan özel zararlar** Daha başka önemli bilgi mevcut değildir.**· 5.3 Yangın söndürme ekipleri için tavsiyeler****· Özel koruyucu teçhizat:** Özel önlemlerin alınması gerekmez.**Bölüm 6: Kaza sonucu yayılmaya karşı önlemler****· 6.1 Kişisel önlemler, koruyucu donanım ve acil durum prosedürleri**

Koruyucu teçhizat takınız. Korunmamış şahısları yaklaştırmayınız.

· 6.2 Çevresel önlemler Kanalizasyona/Yüzeysel suya/Yeraltı suyuna karışmasını önleyiniz.

(Devamı sayfa 3 'da)

Güvenlik Bilgi Formu

1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016

Ticari adı: Sodyum hidroksit

(Sayfa 2 'nin devamı)

- **6.3 Muhafaza etme ve temizleme için yöntemler ve materyaller**
Nötürleyici madde uygulayınız.
Zararlı madde karışmış malzemeyi çöp olarak madde 13 'e göre tasfiye ediniz.
Yeterli havalandırma sağlayınız.
- **6.4 Diğer bölümlere atıflar**
Güvenli kullanım ile ilgili bilgileri 7. bölümden alınız.
Kişisel koruyucu teçhizat ile ilgili bilgileri 8. bölümden alınız.
Tasfiye ile ilgili bilgileri 13. bölümden alınız.

Bölüm 7: Elleçleme ve depolama

- **7.1 Güvenli elleçleme için önlemler** Tozdan arınma iyi yapılmalıdır.
- **Yangın ve patlamadan korunmak için uyarılar:** Özel önlemlerin alınması gerekmez.
- **7.2 Uyuşmazlıkları da içeren güvenli depolama için koşullar**
- **Depolama:**
- **Depolarda ve kaplarda aranan özellikler:** Belirli şartlar aranmaz.
- **Birarada depolama ile ilgili uyarılar:** Gerekli değil.
- **Depolama şartları ile ilgili diğer bilgiler:** Kabı sızdırmayacak şekilde kapalı tutunuz.
- **7.3 Belirli son kullanımlar** Daha başka önemli bilgi mevcut değildir.

Bölüm 8: Maruz kalma kontrolleri/kişisel korunma

- **Teknik tesisatların şekillendirilmesi ile ilgili ek bilgiler:** Başka bilgi yoktur, madde 7 'den bakınız.
- **8.1 Kontrol parametreleri**
- **Çalışma yeri ile ilgili, kontrol edilmesi gereken sınır değerleri olan bileşenler:** Kalkmıştır.
- **Ek uyarılar:** Düzenlendiği tarihte geçerli listeler esas alınmıştır.
- **8.2 Maruz kalma kontrolleri**
- **Kişisel koruyucu teçhizat:**
- **Genel koruyucu ve sıhhi önlemler:**
Gıda maddelerinden, içeceklerden ve yem maddelerinden uzak tutunuz.
Kirlenmiş, sıvı bulaşmış giyim eşyalarını derhal çıkartınız.
Molalardan önce ve mesai sonunda ellerinizi yıkayınız.
Gözlerinize ve cildinize değmesinden kaçınınız.
- **Nefes koruyucu önlemler:** Gerekli değildir.
- **Elleri koruyucu:**



Koruyucu eldivenler

- Eldiven malzemesi ürün / malzeme / hazırlanan madde ile ilgili olarak geçirmez ve dayanıklı olmalıdır.
Testlerin yapılmamış olması nedeni ile ürün / hazırlanmış madde / kimyasal karışım için lâzım olan eldiven imalatında kullanılması gereken malzeme ile ilgili herhangi bir tavsiye yapılamamaktadır.
Eldiven imalatı için kullanılan malzemelerin seçiminde delinme sürelerinin, geçirgenlik oranlarının ve bozulmanın göz önüne alınması gereklidir.
- **Eldiven malzemesi**
Uygun eldivenin seçiminde yalnız imalat malzemesi değil, aynı zamanda diğer kalite özellikleri de dikkate alınmalıdır ve bunlar imalatçıdan imalatçıya değişiklik göstermektedir.
 - **Eldiven malzemesine nüfuz etme süresi**
Kesin delinme (aşınma) süresi eldiven imalatçısından öğrenilmeli ve bu sürelere riayet edilmelidir.

(Devamı sayfa 4 'da)

Güvenlik Bilgi Formu

1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016

Ticari adı: Sodyum hidroksit

(Sayfa 3 'nin devamı)

· Gözleri koruyucu:



Kenarları tam kapatan koruyucu gözlük

Bölüm 9: Fiziksel ve kimyasal özellikler

· 9.1 Temel fiziksel ve kimyasal özellikler hakkında bilgi

· Genel bilgiler

· Görünüm

Biçim: Taneler

Renk: Beyaz

· Koku: Kokusuz

· Koku eşiği: Belirli değil.

· pH - değeri: Uygulanamaz.

· Durum değişikliği

Erime ısısı / Erime ısı alanı: 318 °C

Kaynama ısısı / Kaynama ısı alanı: 1390 °C

· Alev alma ısısı: Uygulanamaz.

· Tutuşabilme özelliği (katı, gaz şeklinde): Madde tutuşmaz niteliktedir.

· Tutuşma ısısı:

Çözülme ısısı: Belirli değil.

· Kendiliğinden tutuşabilme özelliği: Belirli değil.

· Patlama tehlikesi: Ürünün patlama tehlikesi yoktur.

· Patlama sınırları:

Alt: Belirli değil.

Üst: Belirli değil.

· Buhar basıncı 800 °C'de: 3.5 hPa

· Yoğunluk 20 °C'de: 2.13 g/cm³

· Nisbi yoğunluk: Belirli değil.

· Buhar yoğunluğu: Uygulanamaz.

· Buharlaşma hızı: Uygulanamaz.

· Çözülme kabiliyeti / karışma kabiliyeti
suyla 20 °C'de: 420 g/l

· Dağılım katsayısı (n-Octanol/Su): Belirli değil.

· Viskozitesi:

Dinamik: Uygulanamaz.

Kinematik: Uygulanamaz.

· 9.2 Diğer bilgiler: Daha başka önemli bilgi mevcut değildir.

Bölüm 10: Kararlılık ve tepkime

· 10.1 Tepkime: Daha başka önemli bilgi mevcut değildir.

(Devamı sayfa 5 'da)

Güvenlik Bilgi Formu

1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016

Ticari adı: Sodyum hidroksit

(Sayfa 4 'nin devamı)

- **10.2 Kimyasal kararlılık**
- **Termik ayrışma / kaçınılması gereken şartlar:** Usulüne uygun şekilde kullanıldığında ayrışma olmaz.
- **10.3 Zararlı tepkime olasılığı** Tehlikeli reaksiyonları duyulmamıştır.
- **10.4 Kaçınılması gereken durumlar** Daha başka önemli bilgi mevcut değildir.
- **10.5 Kaçınılması gereken maddeler** Daha başka önemli bilgi mevcut değildir.
- **10.6 Zararlı bozunma ürünleri** Ayrışmada oluşan tehlikeli ürünler duyulmamıştır.

Bölüm 11: Toksikolojik bilgiler

- **11.1 Toksik etkiler hakkında bilgi**
- **Akut toksik** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.

- **Sınıflandırma için önemli olan LD/LC50 - değerleri (toksikolojik deney değerleri)**

Ağızdan	LD50	2000 mg/kg (rat)
---------	------	------------------

- **Asli tahriş edici etkisi:**
- **Cilt aşınması/tahrişi**
Ciddi cilt yanıklarına ve göz hasarına yol açar.
- **Ciddi göz hasarları/tahrişi**
Ciddi göz hasarına yol açar.
- **Solunum yolları veya cilt hassaslaşması** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Aşağıdaki grupların potansiyel etkilerine dair bilgiler:**
- **CMR-etkileri (kanser üretici, irsiyet değiştirici ve üremeyi tehdit edici etki)**
- **Eşey hücre mutajenitesi** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Kanserojenite** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Üreme toksisitesi** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Belirli Hedef Organ Toksisitesi - tek maruz kalma**
Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Belirli Hedef Organ Toksisitesi - tekrarlı maruz kalma**
Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Aspirasyon zararı** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.

Bölüm 12: Ekolojik bilgiler

- **12.1 Toksikite**
- **Su toksisitesi:** Daha başka önemli bilgi mevcut değildir.
- **12.2 Kalıcılık ve bozunabilirlik** Daha başka önemli bilgi mevcut değildir.
- **12.3 Biyobirikim potansiyeli** Daha başka önemli bilgi mevcut değildir.
- **12.4 Toprakta hareketlilik** Daha başka önemli bilgi mevcut değildir.
- **Diğer ekolojik uyarılar:**
- **Genel uyarılar:**
Suyu tehdit sınıfı 1 (): suyu hafif tehdit edicidir
Sulandırılmamış vaziyette ya da büyük miktarlarda yeraltı suyuna, duran ve akan sulara ve kanalizasyona ulaşmasını " önleyiniz.
Sulandırılmamış ya da nötrülenmemiş olarak atık sulara ya da ön sulandırma havuzuna ulaşmamalıdır.
- **12.5 PBT ve vPvB değerlendirmesinin sonuçları**
- **PBT:** Uygulanamaz.
- **vPvB:** Uygulanamaz.
- **12.6 Diğer olumsuz etkiler** Daha başka önemli bilgi mevcut değildir.

TR

(Devamı sayfa 6 'da)

Güvenlik Bilgi Formu

1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016


Ticari adı: Sodyum hidroksit

(Sayfa 5 'nin devamı)

Bölüm 13: Bertaraf etme bilgileri

- 13.1 Atık işleme yöntemleri
- Tavsiye: Ev çöpüyle beraber tasfiye edilmesi yasaktır. Kanalizasyona ulaşmasını önleyiniz.
- Temizlenmemiş ambalajlar:
- Tavsiye: Tasfiyesi resmi makamların yönetmeliklerine göre yapılır.
- Tavsiye olunan temizlik maddesi: Su, gerekirse temizlik maddeleri katmak suretiyle.

Bölüm 14: Taşımacılık bilgileri

- | | |
|---|---|
| · 14.1 UN numarası
· ADR, IMDG, IATA | UN1823 |
| · 14.2 Uygun UN taşımacılık adı
· ADR
· IMDG
· IATA | 1823 SODYUM HİDROKSİT, KATI
SODIUM HYDROXIDE, SOLID
Sodium hydroxide, solid |
| · 14.3 Taşımacılık zararlılık sınıf(lar)ı
· ADR, IMDG, IATA | |
|  | |
| · sınıfı
· Tehlike pusulası | 8 Aşındırıcı maddeler
8 |
| · 14.4 Ambalajlama grubu
· ADR, IMDG, IATA | II |
| · 14.5 Çevresel zararlar | Uygulanamaz. |
| · 14.6 Kullanıcı için özel önlemler
· Kemler (tehlke) sayısı:
· EMS - numarası:
· Segregation groups
· Stowage Category
· Segregation Code | Uyarı: Aşındırıcı maddeler
80
8-06
Alkalis
A
SG35 Stow "separated from" acids. |
| · 14.7 MARPOL 73/78 ek II ve IBC koduna göre dökme taşımacılık | Uygulanamaz. |
| · Nakliyat/diğer bilgiler: | |
| · ADR
· Sınırlı Miktarlar
· İstisnai miktarlar (EQ) | 1 kg
Kod: E2
İç ambalaj başına maksimum net miktar: 30 g
Dış ambalaj başına maksimum net miktar: 500 g |
| · Taşıma kategorisi
· Tünel kısıtlama kodu | 2
E |

(Devamı sayfa 7 'da)

TR

Güvenlik Bilgi Formu
1907/2006/AT uyarınca, Madde 31

Baskı tarihi: 20.04.2016

Yeniden düzenleme tarihi: 20.04.2016

Ticari adı: Sodyum hidroksit

(Sayfa 6'nın devamı)

· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
· UN "Model Düzenleme":	UN 1823 SODYUM HİDROKSİT, KATI, 8, II

Bölüm 15: Mevzuat bilgileri

- **15.1 Madde veya karışıma özgü güvenlik, sağlık ve çevre mevzuatı** Daha başka önemli bilgi mevcut değildir.
- **15.2 Kimyasal güvenlik değerlendirmesi:** Bir Kimyasal güvenlik değerlendirmesi yapılmamıştır.

Bölüm 16: Diğer bilgiler

Veriler bugünkü bilgi durumumuza istinat etmektedir, ancak ürün özellikleri ile ilgili teminat teşkil etmezler ve akdî bir hukuki ilişki tesis etmezler.

· **Kısaltmalar ve:**

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Metaller için aşındırıcı madde veya karışım, Kategori 1

Skin Corr. 1A: Cilt aşınması/tahrişi, Kategori 1A

Eye Dam. 1: Ciddi göz hasarı/göz tahrişi, Kategori 1

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

1 Nhận biết các chất hoặc hỗn hợp và các doanh nghiệp

- **Phân loại sản phẩm**
- **Tên giao dịch** **Sodium Hydroxide**
- **Mã giao dịch:** 21160, 21162, 21160-sp
- **Mã CAS:**
1310-73-2
- **Số EC:**
215-185-5
- **Mã hiển thị:**
011-002-00-6
- **Các trường hợp được dùng chất, hỗn hợp này và các trường hợp chống chỉ định**
Không có thêm thông tin có liên quan.
- **Hướng dẫn sử dụng** Phòng thí nghiệm hóa chất
- **Thông tin chi tiết của các nhà cung cấp các bảng dữ liệu an toàn**
- **Nhà sản xuất / Nhà phân phối:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Các thông tin chi tiết có thể tìm thấy ở:** Product safety department
- **Số điện thoại khẩn cấp:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Xác định các trường hợp nguy hiểm có thể xảy ra

- **Phân loại chất và hỗn hợp**



Ăn mòn

Met. H290 Có thể ăn mòn kim loại.
 Ăn mòn da 1A H314 Gây bỏng da nghiêm trọng và nguy hiểm cho mắt.
 Có hại cho mắt 1. H318 Gây thiệt hại nghiêm trọng cho mắt.
 Aquatic Acute 3 H402 Có hại đối với môi trường nước.

- **Các phần tử nhãn hiệu**
- **Các yếu tố trên nhãn GHS** Chất này được xếp loại và ghi nhãn theo quy định của GHS
- **Các hình biểu thị sự nguy hiểm**



GHS05

- **Từ chỉ dấu hiệu** Nguy hiểm
- **Các hướng dẫn về các nguy hiểm**
Có thể ăn mòn kim loại.
Gây bỏng da nghiêm trọng và nguy hiểm cho mắt.
Có hại đối với môi trường nước.

(Xem tiếp ở trang 2)

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 1)

- **Các hướng dẫn an toàn**
Nếu tiếp xúc trên da (hoặc tóc): ngay lập tức cởi bỏ tất cả quần áo nhiễm độc. Rửa bằng nước/ vòi hoa sen
NEU DINH MAT: Rửa thật cẩn thận với nước trong vài phút. Tháo kính áp tròng nếu có và nếu dễ làm. Sau đó tiếp tục rửa
Gọi ngay trung tâm giải độc/ bác sĩ
Việc chữa trị cụ thể (xem trên nhãn mác).
Nơi cất giữ được khóa lại
Vứt sản phẩm/vỏ hộp theo quy định của địa phương/khu vực/quốc gia/quốc tế.
- **Các dấu hiệu nguy hiểm khác:**
- **Kết quả của đánh giá PBT và vPvB Results**
- **PBT:** Không được áp dụng
- **vPvB:** Không được áp dụng

3 Thành phần / Thông tin của công thức

- **Mô tả tính chất hóa học: Chất**
- **Mô tả mã CAS**
1310-73-2 Sodium Hydroxide
- **Mã nhận biết**
- **Số EC:** 215-185-5
- **Mã hiển thị :** 011-002-00-6

4 Các biện pháp sơ cứu

- **Mô tả về các biện pháp sơ cứu**
- **Hướng dẫn chung:** Ngay lập tức loại bỏ quần áo bị vấy bẩn bởi sản phẩm
- **Sau khi hít vào:**
Trong trường hợp người bệnh bất tỉnh giữ bệnh nhân ở vị trí nằm nghiêng và chuyển đi.
- **Sau khi tiếp xúc với da:** Rửa ngay và thật sạch với nước và xà phòng
- **Sau khi tiếp xúc với mắt:** Nhẹ nhàng rửa mắt trong vài phút dưới vòi nước, sau đó xin tư vấn bác sĩ
- **Sau khi nuốt phải:** Uống nhiều nước và hít thở không khí trong lành. Gọi ngay cho bác sĩ
- **Thông tin dành cho bác sĩ:**
- **Những triệu chứng và tác dụng cấp và chậm quan trọng nhất:**
Không có thông tin liên quan nào khác
- **Các chỉ dẫn về sự giúp đỡ tức thời của bác sĩ và trợ giúp đặc biệt**
Không có thêm thông tin liên quan

5 Các giải pháp chữa cháy

- **Các phương tiện chữa cháy**
- **Các giải pháp chữa cháy thích hợp**
CO₂, bột hay phun bụi nước. Chữa đám cháy lớn hơn phải phun bụi nước hay bột ARC
- **Những nguy cơ gây cháy từ các chất hoặc hỗn hợp** Không có thêm thông tin liên quan
- **Hướng dẫn trong trường hợp chữa cháy**
- **Các thiết bị bảo vệ** Không cần đến những biện pháp đặc biệt

VN

(Xem tiếp ở trang 3)

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 2)

6 Các biện pháp trong trường hợp giải phóng bất ngờ

- **Các biện pháp phòng ngừa cá nhân, thiết bị bảo hộ và thủ tục khẩn cấp**
Đeo thiết bị bảo vệ. Những ai không có thiết bị bảo vệ không được vào khu vực nguy hiểm
- **Các biện pháp bảo vệ môi trường**
Ngăn không cho tràn vào hệ thống nước thải, nước mặt hay nước ngầm
- **Các phương pháp và nguyên liệu dùng cho việc ngăn chặn và làm sạch**
Sử dụng chất trung hòa.
Loại bỏ vật liệu bị ô nhiễm theo quy định về chất thải tại mục 13
Đảm bảo thoáng khí
- **Liên hệ đến các phần khác**
Xem phần 7 để biết thông tin về xử lý an toàn
Xem phần 8 để biết thông tin và thiết bị bảo hộ cá nhân
Xem phần 13 để biết thông tin về xả thải

7 Xử lý và lưu trữ

- **Xử lý**
- **Các biện pháp bảo vệ để xử lý an toàn** Loại bỏ hoàn toàn bụi
- **Thông tin về các biện pháp chống cháy**, Không có yêu cầu về biện pháp đặc biệt
- **Điều kiện cho việc lưu trữ an toàn, bao gồm cả sự không tương thích**
- **Lưu trữ:**
- **Yêu cầu đối với phòng chứa và dụng cụ chứa** Không có yêu cầu đặc biệt nào
- **Thông tin về lưu trữ đối với một cơ sở lưu trữ thông thường** Không yêu cầu
- **Thông tin thêm về điều kiện lưu trữ** Đậy kín bình chứa
- **Tác dụng của sản phẩm** Không có thêm thông tin liên quan

8 Kiểm soát các tình huống nguy hiểm / Bảo vệ cá nhân

- **Thông tin thêm về thiết kế các phương tiện kỹ thuật** Không có thêm dữ liệu; xem mục 7
- **Các thông số điều khiển**

- **Các thành phần với giá trị giới hạn cần được yêu cầu giám sát tại nơi làm việc**

1310-73-2 Sodium Hydroxide

PEL (US)	Giá trị dài hạn: 2 mg/m ³
REL (US)	Ceiling limit value: 2 mg/m ³
TLV (US)	Ceiling limit value: 2 mg/m ³

- **Thông tin bổ sung** Danh sách có hiệu lực trong suốt quá trình thực hiện được sử dụng làm cơ sở
- **Kiểm soát các tình huống nguy hiểm**
- **Các thiết bị an toàn cá nhân**
- **Các biện pháp bảo vệ và vệ sinh tổng thể**
Tránh xa thực phẩm, đồ uống và đồ ăn cho vật nuôi
Loại bỏ ngay lập tức tất cả quần áo bị nhiễm bẩn
rửa tay trước giờ nghỉ và cuối giờ làm
Tránh tiếp xúc với mắt và da
- **Bảo vệ đường hô hấp:** Không yêu cầu

(Xem tiếp ở trang 4)

VN

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 3)

· Bảo vệ tay



Găng tay bảo hộ

Chất liệu làm găng phải chống thấm đối với sản phẩm/chất/chế phẩm

Do không thấy các cuộc thử nghiệm nên không có khuyến cáo về chất liệu làm găng tay cho sản phẩm/chế phẩm/hỗn hợp hóa chất

Chọn chất liệu găng theo số lần và thời gian sử dụng

· Chất liệu của găng tay

Việc lựa chọn găng tay phù hợp không chỉ phụ thuộc vào chất liệu, mà còn về nhãn hiệu hơn và chất lượng và rất đa dạng về nhà sản xuất

· Thời gian xâm nhập của găng tay vật liệu

Việc phá vỡ chính xác qua thời gian đã được phát hiện bởi các nhà sản xuất găng tay bảo vệ và phải được giám sát

· Bảo vệ mắt Eye



Kính bảo hộ dán kín

9 Tính chất vật lý và hóa học

· Thông tin về tính chất vật lý và hóa học cơ bản

· Thông tin tổng quát

· Diện mạo:

Hình thức::

Viên

Màu:

Trắng

· Mùi:

Không mùi

· Ngưỡng mùi:

Không xác định.

· Độ pH:

Không thể áp dụng.

· Thay đổi trong điều kiện

Điểm tan / Phạm vi tan

318 °C

Điểm sôi / Phạm vi sôi

1390 °C

· Điểm bay hơi:

Không thể áp dụng.

· Tính dễ cháy (rắn, khí):

Sản phẩm không cháy.

· Nhiệt độ cháy:

Nhiệt độ phân hủy:

Không xác định.

· Tự cháy:

Không xác định.

· Nguy hiểm do cháy nổ:

Sản phẩm không có nguy cơ cháy nổ

· Giới hạn nổ:

Dưới:

Không xác định

Trên:

Không xác định.

· Áp lực hơi tại 800 °C:

3.5 hPa

· Mật độ tại 20 °C:

2.13 g/cm³

(Xem tiếp ở trang 5)

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 4)

- | | |
|---|---------------------------------------|
| · Mật độ tương đối: | Không xác định. |
| · Mật độ của hơi: | Không thể áp dụng. |
| · Tỉ lệ bay hơi: | Không thể áp dụng. |
| · Độ hòa tan trong / Độ hòa trộn với: | |
| Nước tại 20 °C: | 420 g/l |
| · Sự phân biệt hệ số (n-octanol / Nước): | Không xác định. |
| · Độ nhớt: | |
| Động | Không thể áp dụng. |
| Tĩnh | Không thể áp dụng. |
| · Thông tin khác: | Không có thông tin chi tiết tương ứng |

10 Sự ổn định và phản ứng:

- **Phản ứng:** Không có thêm thông tin liên quan
- **Sự ổn định hóa học:**
- **Phân hủy nhiệt / Điều kiện cần tránh::** Không phân hủy nếu được sử dụng theo tiêu chuẩn.
- **Khả năng phản ứng nguy hiểm:** Chưa có phản ứng nguy hiểm nào được biết tới.
- **Các điều kiện cần tránh:** Không có thêm thông tin liên quan
- **Vật liệu không tương thích:** Không có thêm thông tin liên quan.
- **Sản phẩm phân hủy nguy hiểm:** Chưa có sản phẩm phân hủy nào được biết đến.

11 Thông tin độc tính:

- **Thông tin về các hiệu ứng độc tính:**
- **Ngộ độc cấp tính:**

· Phân loại liên quan tới giá trị LD/LC50

Miệng	LD50	2000 mg/kg (rat)
-------	------	------------------

- **Hiệu ứng kích thích sơ cấp:**
- **Trên da** Tác dụng ăn mòn da và lớp màng nhầy niêm mạc mạnh
- **Trên mắt:** Tác dụng ăn mòn mạnh.
- **Độ nhạy cảm** Không có tác dụng mẫn cảm nào được biết tới.
- **Thông tin thêm về độc tính::**
Nướu phải sẽ dẫn đến bị ăn mòn da mạnh ở miệng và họng đồng thời dẫn đến nguy cơ thủng thực quản và dạ dày..

12 Thông tin sinh thái

- **Độc tính**
- **Thủy sản độc tính:** Không có thêm thông tin liên quan.
- **Sự kiên trì và khả năng nhạt dần:** Không có thêm thông tin liên quan.
- **Hành vi trong các hệ thống môi trường:**
- **Tiềm năng tích lũy sinh học** Không có thêm thông tin liên quan.
- **Tính lưu động trong đất** Không có thêm thông tin liên quan.
- **Bổ sung thông tin sinh thái:**
- **Ghi chú tổng quát:**
Độc hại cho nước loại 1 (quy định của Đức) (Đánh giá theo danh sách): hơi độc cho nước.

(Xem tiếp ở trang 6)

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 5)
Không để sản phẩm chưa pha loãng hoặc số lượng lớn tiếp xúc với nước nhằm, nguồn nước hoặc hệ thống nước thải.


Không được bỏ vào hệ thống nước thải hoặc hệ thống thoát nước mà chưa pha loãng hoặc chưa trung hòa.

- **Kết quả của đánh giá PBT và vPvB**
- **PBT PBT:** Không có khả năng ứng dụng.
- **vPvB vPvB:** Không có khả năng ứng dụng.
- **Các hiệu ứng bất lợi** Không có thêm thông tin liên quan.

13 Xem xét xử lý

- **Phương pháp xử lý chất thải**
- **Khuyến nghị**
Không được xử lý cùng rác thải sinh hoạt. Không được bỏ sản phẩm vào hệ thống nước thải.
- **Bao bì bán**
- **Khuyến nghị:** Việc xử lý phải thực hiện theo các quy định của chính quyền.
- **Các chất tẩy rửa được khuyến nghị sử dụng** Nước, nếu cần, kết hợp với chất tẩy rửa.

14 Thông tin vận chuyển

- | | |
|--|--|
| <ul style="list-style-type: none"> · Mã LHQ (UN) · ADR, IMDG, IATA | <p style="text-align: right;">UN1823</p> |
| <ul style="list-style-type: none"> · Tên vận chuyển theo quy ước của LHQ · ADR · IMDG · IATA | <p style="text-align: right;">1823 SODIUM HYDROXIDE, SOLID
SODIUM HYDROXIDE, SOLID
Sodium hydroxide, solid</p> |
| <ul style="list-style-type: none"> · vận chuyển các lớp học nguy hiểm · ADR, IMDG, IATA | <div style="text-align: center;">  </div> |
| <ul style="list-style-type: none"> · lớp · nhãn | <p style="text-align: right;">8 Chất ăn mòn.
8</p> |
| <ul style="list-style-type: none"> · Nhóm bao bì · ADR, IMDG, IATA | <p style="text-align: right;">II</p> |
| <ul style="list-style-type: none"> · Các môi trường nguy hiểm: | <p style="text-align: right;">Không có khả năng ứng dụng..</p> |
| <ul style="list-style-type: none"> · Các biện pháp phòng ngừa đặc biệt cho người sử dụng: · Mã nguy hiểm: · Mã EMS: · Các nhóm phân tách · Stowage Category · Segregation Code | <p style="text-align: right;">Cảnh báo: Chất ăn mòn.
80
8-06
Alkalis
A
SG35 Stow "separated from" acids.</p> |
| <ul style="list-style-type: none"> · Vận chuyển với số lượng lớn theo Phụ Lục II của MARPOL73/78 và mã IBC | <p style="text-align: right;">Không có khả năng ứng dụng.</p> |

(Xem tiếp ở trang 7)

Dữ liệu an toàn

Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 6)

· Vận chuyển/ Thông tin thêm:

· ADR

- Số lượng giới hạn (LQ) 1 kg
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g
- Danh mục vận chuyển 2
- Mã hạn chất đường hầm E

· IMDG

- Limited quantities (LQ) 1 kg
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g

- Mẫu chuẩn của LHQ: UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 Thông tin quy định:

- An toàn, sức khỏe và các quy định, pháp luật về môi trường cho các chất và hỗn hợp
- Kho hóa chất và chất hóa học của Philippin Chất được liệt kê.
- Kho chất hóa học của Australia Chất được liệt kê.

· Lập kế hoạch cho thuốc và chất độc theo mẫu chuẩn

1310-73-2	Sodium Hydroxide	S5, S6, S10
-----------	------------------	-------------

- Các yêu tố trên nhãn GHS Chất này được xếp loại và ghi nhãn theo quy định của GHS
- Các hình biểu thị sự nguy hiểm



GHS05

- Từ chỉ dấu hiệu Nguy hiểm
- Các hướng dẫn về các nguy hiểm
Có thể ăn mòn kim loại.
Gây bỏng da nghiêm trọng và nguy hiểm cho mắt.
Có hại đối với môi trường nước.
- Các hướng dẫn an toàn
Nếu tiếp xúc trên da (hoặc tóc): ngay lập tức cởi bỏ tất cả quần áo nhiễm độc. Rửa bằng nước/ vòi hoa sen
NẾU DÍNH MẮT: Rửa thật cẩn thận với nước trong vài phút. Tháo kính áp tròng nếu có và nếu dễ làm.
Sau đó tiếp tục rửa
Gọi ngay trung tâm giải độc/ bác sĩ
Việc chữa trị cụ thể (xem trên nhãn mác).
Nơi cất giữ được khóa lại
Vứt sản phẩm/vỏ hộp theo quy định của địa phương/khu vực/quốc gia/quốc tế.
- Đánh giá an toàn hóa chất: Đánh giá an toàn hóa chất chưa được tiến hành.

VN

(Xem tiếp ở trang 8)

Dữ liệu an toàn
Theo điều 1907/2006/EC, khoản 31

Ngày in 2016.04.20

Sửa lại: 2016.04.20

Tên giao dịch Sodium Hydroxide

(Xem tiếp ở trang 7)

16 Thông tin khác

Thông tin này dựa trên kiến thức hiện nay của chúng tôi. Tuy nhiên, điều này không đảm bảo cho bất cứ tính chất cụ thể nào của sản phẩm và không thiết lập mối quan hệ hợp tác có giá trị pháp lý nào.

· Chữ viết tắt hoặc Viết tắt chữ cái đầu:

ADR: Accord européen sur le transport 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

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met.: Corrosive to metals, Hazard Category 1

Ăn mòn da 1A: Skin corrosion/irritation, Hazard Category 1A

Có hại cho mắt 1.: Serious eye damage/eye irritation, Hazard Category 1

Aquatic Acute 3: Hazardous to the aquatic environment - AcuteHazard, Category 3

VN