SAFETY DATA SHEET
(SDS)

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008, (EU) No. 2015/830

Revision Date 24-Mar-2021 **WAI2 - EGHS - EUROPEAN** **Revision Number** 5

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name Alkaline Reagent

Product No 951011

Pure substance/mixture Mixture

Contains Sodium Hydroxide

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

Recommended Use Use as laboratory reagent

Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier Thermo Fisher Scientific
Robert-Bosch-Str. 163505
Langenselbold, GERMANY
Tel.: +49 (6184) 90-6000

E-mail address info.water@thermo.com

Made in USA

1.4. Emergency telephone number

24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - Mixture

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

Skin Corrosion/Irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Contains Sodium Hydroxide



Signal Word
Danger

Hazard Statements
H314 - Causes severe skin burns and eye damage
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P280 - Wear eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P273 - Avoid release to the environment
P202 - Do not handle until all safety precautions have been read and understood

2.3. Other hazards

May be harmful in contact with skin
Harmful to aquatic life

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	EC-No.	CAS-No	Weight %	CLP Classification - Regulation (EC) No 1272/2008	REACH Reg. No
Water	EEC No. 231-791-2	7732-18-5	60 - 70%	-	No information available
Sodium Hydroxide	EEC No. 215-185-5	1310-73-2	40 - 50%	Skin Corr. 1A (H314)	No information available

Note *The exact percentage (concentration) of composition has been withheld as a trade secret

Full text of H- and EUH-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. Show this safety data sheet to the doctor in attendance.

Eye Contact In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately.

Self-Protection of the First Aider Use personal protective equipment as required. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

Most important symptoms and effects See section 11, See section 2 for more information

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

Notes to Physician Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required. Evacuate personnel to safe areas.

6.2. Environmental precautions

Environmental Precautions Vapors may accumulate to form explosive concentrations.

6.3. Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Reference to Other Sections
Refer to protective measures listed in Sections 7 and 8
See Section 8 for information on appropriate personal protective equipment
See Section 12 for additional Ecological Information
See Section 13 for additional waste treatment information

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
To avoid risks to human health and the environment, comply with the instructions for use. Wear personal protective equipment/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation, especially in confined areas.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Protect from direct sunlight.

7.3. Specific end use(s)

Specific Use(s)
Use as laboratory reagent

Risk Management Methods (RMM)
The information required is contained in this Safety Data Sheet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

Component	European Union	The United Kingdom	France	Spain	Germany
Sodium Hydroxide 1310-73-2	-	STEL: 2 mg/m³ 15 min	TWA / VME: 2 mg/m³ (8 heures).	STEL / VLA-EC: 2 mg/m³ (15 minutos).	-
Component	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
Sodium Hydroxide 1310-73-2	-	Ceiling: 2 mg/m³	-	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³
Component	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Sodium Hydroxide 1310-73-2	MAK-KZW: 4 mg/m³ 15 Minuten MAK-TMW: 2 mg/m³ 8 Stunden	STEL: 2 mg/m³ 15 Minuten TWA: 2 mg/m³ 8 Stunden	STEL: 1 mg/m³ 15 minutach TWA: 0.5 mg/m³ 8 godzinach	Ceiling: 2 mg/m³	STEL: 2 mg/m³ 15 min

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face Protection Wear chemical splash goggles and face shield. If splashes are likely to occur:. Goggles.

Skin and body protection Wear protective gloves/protective clothing.

Respiratory Protection No protective equipment is needed under normal use conditions. In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	None
Odor Threshold	No information available
pH	14
PH Range	No information available

Property	**Values**	**Remarks • Method**
Melting point/freezing point	No information available	
Boiling Point/Range	~ 100 °C / 212 °F	
Flash Point (High in °C)	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	Soluble	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature	-	
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

Softening Point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density	No Information available
Bulk Density	No information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No information available

10.2. Chemical stability
Stable under normal conditions

Explosion Data

Sensitivity to Mechanical Impact None
Sensitivity to Static Discharge None

10.3. Possibility of hazardous reactions
None under normal processing

10.4. Conditions to avoid
Extremes of temperature and direct sunlight

10.5. Incompatible materials
No information available

10.6. Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity

Product Information

Inhalation No information available
Eye Contact No information available
Skin Contact No information available
Ingestion No information available

Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity.
The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 812.00 mg/kg
ATEmix (dermal) 3,375.00 mg/kg

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg (Rat)		
Sodium Hydroxide	LD50 = 325 mg/kg (Rat)	LD50 = 1350 mg/kg (Rabbit)	

Skin Corrosion/Irritation No information available

Serious eye damage/eye irritation No information available

Sensitization No information available

Mutagenic Effects No information available

Carcinogenic effects No information available

Reproductive Effects No information available

STOT - single exposure No information available

STOT - repeated exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Harmful to aquatic life Harmful to aquatic life with long lasting effects
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Sodium Hydroxide	-	LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss)	-

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

Mobility

No information available

12.5. Results of PBT and vPvB assessment

No information available

12.6. Endocrine disrupting properties

No information available

Endocrine Disruptor Information

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Improper disposal or reuse of this container may be dangerous and illegal.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN-No UN1824
14.2 Proper Shipping Name SODIUM HYDROXIDE SOLUTION
14.3 Hazard Class 8
14.4 Packing Group II
Description UN1824, SODIUM HYDROXIDE SOLUTION, 8, II
14.5 Marine Pollutant Not Applicable
14.6 Special Provisions None
EmS No. F-A, S-B
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

ICAO

14.1 UN-No UN1824

14.2 Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
14.3 Hazard Class	8
14.4 Packing Group	II
Description	UN1824, SODIUM HYDROXIDE SOLUTION, 8, II
14.5 Environmental hazard	Not Applicable
14.6 Special Provisions	A3

IATA

14.1 UN-No	UN1824
14.2 Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
14.3 Hazard Class	8
14.4 Packing Group	II
Description	UN1824, SODIUM HYDROXIDE SOLUTION, 8, II
14.5 Environmental hazard	Not Applicable
14.6 Special Provisions	A3, A803
ERG Code	8L

SECTION 15: REGULATORY INFORMATION

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

WGK Classification Water endangering class = 1 (self classification)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

United States of America Inventory	Complies
CANINV	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CANINV/ DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

A Chemical safety assessment according to regulation (EC) No. 1907/2006 is not required

SECTION 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H314 - Causes severe skin burns and eye damage

Legend - SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared By	Regulatory Affairs
Prepared For	Thermo Fisher Scientific Inc.
Issue Date	No information available
Revision Date	24-Mar-2021
Reason for revision	SDS sections updated.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

IMPORTANT: The information contained in this SDS is correct to the best of our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties of any kind as to the accuracy or completeness of the information contained herein or the merchantability or fitness of the product or this information for a particular purpose. It is the responsibility of each individual buyer/user to determine the suitability of this information and the product for its intended purposes. Product sales are subject to Thermo Fisher Scientifics standard terms and conditions of sale. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions, or is altered in any way. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable government requirements. Since conditions of use of the product are not under direct control of Thermo Fisher Scientific, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Thermo Fisher Scientific will not be liable for any injuries or damages resulting from handling, use, misuse or contact with the product.

End of Safety Data Sheet