



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

1 Identification

- **Product identifier**
- **Trade name:** 7X Lysis Buffer
- **Article number:** D4036-1-6, D4036-1-12, D4036-1-30, D4036-1-48, D4036-1-60
- **Application of the substance / the mixture** Laboratory Reagent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Zymo Research Corp.
17062 Murphy Ave.
Irvine, CA 92614
USA
Phone: 1-949-679-1190 or 1-888-882-9682
sds@zymoresearch.com
- **Information department:** Product safety department
- **Emergency telephone number:**
During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS05
- **Signal word** Danger
- **Hazard-determining components of labeling:**
sodium hydroxide
- **Hazard statements**
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
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.
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.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 1)

- Classification system:
NFFPA ratings (scale 0 - 4)



- HMIS-ratings (scale 0 - 4)



- Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

Table with 3 columns: CAS number, substance name, and percentage. Includes sodium dodecyl sulphate (≤10%) and sodium hydroxide (≤2.5%).

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: Do not induce vomiting; immediately call for medical help.
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.

(Contd. on page 3)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 2)

- **Special hazards arising from the substance or mixture**
Products of thermal decomposition of this material would include caustic vapors as well as sodium and sulfur compounds.
- **Advice for firefighters**
- **Protective equipment:**
Wear protective clothing, including self-contained breathing apparatus, for fighting fires involving this material.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

| | | |
|----------------|-------------------------|-----------|
| CAS: 151-21-3 | sodium dodecyl sulphate | 3.9 mg/m3 |
| CAS: 1310-73-2 | sodium hydroxide | 0.5 mg/m3 |

· **PAC-2:**

| | | |
|----------------|-------------------------|----------|
| CAS: 151-21-3 | sodium dodecyl sulphate | 43 mg/m3 |
| CAS: 1310-73-2 | sodium hydroxide | 5 mg/m3 |

· **PAC-3:**

| | | |
|----------------|-------------------------|-----------|
| CAS: 151-21-3 | sodium dodecyl sulphate | 260 mg/m3 |
| CAS: 1310-73-2 | sodium hydroxide | 50 mg/m3 |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 4)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 3)

- Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Information about storage in one common storage facility:
Further information about storage conditions:
Specific end use(s)

8 Exposure controls/personal protection

- Additional information about design of technical systems:
Control parameters
Components with limit values that require monitoring at the workplace:

CAS: 1310-73-2 sodium hydroxide

Table with 2 columns: Limit Type (PEL, REL, TLV) and Value (Long-term value: 2 mg/m³, Ceiling limit value: 2 mg/m³)

- Additional information:
Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Breathing equipment:
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

(Contd. on page 5)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 4)

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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:

Table with 2 columns: Property (Form, Color, Odor, Odor threshold) and Value (Liquid, Blue, Nearly odorless, Not determined).

pH-value: Not determined.

Change in condition

Table with 2 columns: Property (Melting point/Melting range, Boiling point/Boiling range) and Value (Undetermined, Undetermined).

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature:

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

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

Explosion limits:

Table with 2 columns: Property (Lower, Upper) and Value (Not Applicable, Not Applicable).

Vapor pressure: Not determined.

Table with 2 columns: Property (Density, Relative density, Vapor density, Evaporation rate) and Value (Not determined, Not determined, Not determined, Not determined).

(Contd. on page 6)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 5)

Table with 2 columns: Property and Value. Rows include Solubility in Water, Partition coefficient, Viscosity (Dynamic and Kinematic), Solvent content (Organic solvents, VOC), Solids content, and Other information.

10 Stability and reactivity

- Reactivity: No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: Products of thermal decomposition...
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: Acids, chlorinated solvents, and reactive metals...
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
Acute toxicity:

Table with 2 columns: Route and LD50. Row: Oral LD50 2000 mg/kg (rat)

- Primary irritant effect:
on the skin: Caustic effect on skin and mucous membranes.
on the eye: Strong caustic effect.
Sensitization: No sensitizing effects known.
Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations: Corrosive. Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

(Contd. on page 7)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 6)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is 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 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.

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:

Dispose of contents in accordance with local/regional/national, and international recommendations.

Uncleaned packagings:

Recommendation:

Dispose of container in accordance with local/regional/national and international recommendations.

- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number

DOT, IMDG, IATA

UN1760

(Contd. on page 8)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 7)

UN proper shipping name: Corrosive liquids, n.o.s. (Sodium hydroxide)
DOT: CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)
IMDG, IATA: CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)

Transport hazard class(es):

DOT



Class: 8 Corrosive substances

Label: 8

IMDG, IATA



Class: 8 Corrosive substances

Label: 8

Packing group

DOT, IMDG, IATA: II

Environmental hazards: Not applicable.

Special precautions for user: Warning: Corrosive substances

Danger code (Kemler): 80

EMS Number: F-A,S-B

Segregation groups: Alkalis

Stowage Category: B

Stowage Code: SW2 Clear of living quarters.

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: 1 L
On cargo aircraft only: 30 L

IMDG

Limited quantities (LQ): 1L

Excepted quantities (EQ): Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 8)

UN "Model Regulation": UN 1760 CORROSIVE LIQUIDS, N.O.S. (SODIUM HYDROXIDE), 8, II

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS05

Signal word Danger

Hazard-determining components of labeling:

sodium hydroxide

Hazard statements

Causes severe skin burns and eye damage.

Precautionary statements

Do not breathe mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 10)



Safety Data Sheet
acc. to OSHA HCS

Printing date 04/25/2017

Reviewed on 12/16/2016

Trade name: 7X Lysis Buffer

(Contd. of page 9)

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.
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.
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.

· **Department issuing SDS:**

Zymo Research Corp.
Safety Department
17062 Murphy Ave.
Irvine, CA 92614
USA

Phone: 1-949-679-1190 or 1-888-882-9682

· **Contact:** sds@zymoresearch.com

· **Date of preparation / last revision** 04/25/2017 / -

· **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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
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
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1