

Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

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SECTION 1: Identification

Product identifier

Trade name/designation:	Nessler's reagent NH3-N
Product No.:	BDH7332
Synonymes:	none/none
CAS No.:	not applicable
Other means of identification:	

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

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Supplier

VWR International LLC

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/City	Radnor, PA 19087
Telephone	+1-800-932-5000 toll-free within US/Canada +1-610-386-1700
Telefax:	+1-610-728-2103

Emergency phone number

Telephone +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA)

Preparation Information

VWR International - Product Information Compliance

E-mail sds@vwr.com

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Substance or mixture corrosive to metals, category 1	H290
Acute toxicity, category 1, dermal	H310
Acute toxicity, category 2, oral	H300
Acute toxicity, category 2, inhalation	H330
Skin corrosion, category 1A	H314
Serious eye damage, category 1	H318
Specific target organ toxicity (repeated exposure), category 2	H373

2.2 Label elements

Labelling in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard pictograms



Signal word: Danger

Hazard statements	
H290	May be corrosive to metals.
H310	Fatal in contact with skin.
H300	Fatal if swallowed.
H330	Fatal if inhaled.
H314	Causes severe skin burns and eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Hazards not otherwise classified (HNOC)
none/none

SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

Hazardous ingredients Classification according to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Substance name	Concentration	Identifier	Hazard classes and hazard categories
Sodium hydroxide	10 - 15%	CAS No.: 1310-73-2	Skin Corr. 1A - H314
Nessler Reagents	10 - 15%	CAS No.: 7783-33-7	Acute Tox. 1 - H310 Acute Tox. 2 - H300 Acute Tox. 2 - H330 STOT RE 2 - H373

SECTION 4: First aid measures

4.1 General information

IF exposed: Immediately call a POISON CENTER/doctor. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

In case of inhalation

Immediately call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media

The product itself does not burn.
Co-ordinate fire-fighting measures to the fire surroundings.

Extinguishing media which must not be used for safety reasons

no restriction

5.2 Specific hazards arising from the chemical

In case of fire may be liberated:
Pyrolysis products, toxic

5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.
Protective equipment and precautions for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.
Do not inhale explosion and combustion gases.
Use water spray/stream to protect personnel and to cool endangered containers.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe gas/vapor/spray. Provide adequate ventilation. Use personal protection equipment. In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.
Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Collect in closed and suitable containers for disposal.

6.4 Additional information

Clear spills immediately.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

All work processes must always be designed so that the following is as low as possible:

Inhalation

skin contact

Eye contact

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: no data available

Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Sodium hydroxide	NIOSH	US	STV	2 mg/m ³
Sodium hydroxide	OSHA	US	LTV	2 mg/m ³

8.2 Engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time::	480 min

By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time::	> 480 min

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Additional information

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	light yellow
(b) Odour:	no data available
(c) Odour threshold:	no data available

Safety relevant basic data

(d) pH:	>12 (20 °C)
(e) Melting point/freezing point:	no data available
(f) Initial boiling point and boiling range:	no data available
(g) Flash point:	no data available
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	not applicable
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapour pressure:	no data available
(l) Vapour density:	no data available
(m) Relative density:	no data available
(n) Solubility(ies)	
Water solubility (g/L):	no data available
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	no data available
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

9.2 Other information

Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

10.7 Additional information

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity:

no data available

Acute dermal toxicity:

Sodium hydroxide - LD50: 1350 mg/kg - Rabbit - (IUCLID)

Acute inhalation toxicity:

no data available

Irritant and corrosive effects

Primary irritation to the skin:

Causes severe skin burns and eye damage.

Irritation to eyes:

Causes serious eye damage.

Irritation to respiratory tract:

not applicable

Respiratory or skin sensitization

In case of skin contact: not sensitising

In case of inhalation: not sensitising

STOT-single exposure

not applicable

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

not applicable

Other adverse effects

no data available

Additional information

no data available

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish toxicity:

Sodium hydroxide - LC50: 196 mg/l (96 h) - Adema, D.M.M. 1985. Aquatic Toxicity of Compounds that may be Carried by Ships (Marpol 19733 Annex II). A Progress Report for 1985. Tech.Rep.No.R85/217, TNO, The Hague, Netherlands :40 p.

Daphnia toxicity:

Sodium hydroxide - EC50: 40.4 mg/l (48 h) - Warne, M.S.J., and A.D. Schifko 1999. Toxicity of Laundry Detergent Components to a Freshwater Cladoceran and Their Contribution to Detergent Toxicity. Ecotoxicol.Environ.Saf. 44(2):196-206

Algae toxicity:

no data available

Bacteria toxicity:
no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil:

no data available

12.5 Results of PBT/vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Additional information

no data available

SECTION 14: Transport information

Land transport (DOT)

UN-No.:	UN2922
Proper Shipping Name:	CORROSIVE LIQUIDS, TOXIC, N.O.S. (SODIUM HYDROXIDE/POTASSIUM TETRAIODOMERCURATE SOLUTION)
Class(es):	8 (6.1)
Hazard label(s):	8+6.1
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

Sea transport (IMDG)

UN-No.:	2922
Proper Shipping Name:	CORROSIVE LIQUID, TOXIC, N.O.S. (SODIUM HYDROXIDE/POTASSIUM TETRAIODOMERCURATE SOLUTION)
Class(es):	8 (6.1)
Classification code:	
Hazard label(s):	8+6.1
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	
Segregation group:	1
EmS-No.	F-A S-B
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not relevant

Air transport (ICAO-TI / IATA-DGR)

UN-No.:	2922
Proper Shipping Name:	CORROSIVE LIQUID, TOXIC, N.O.S. (SODIUM HYDROXIDE/POTASSIUM TETRAIODOMERCURATE SOLUTION)
Class(es):	8 (6.1)
Classification code:	
Hazard label(s):	8+6.1
Packing group:	II
Special precautions for user:	

SECTION 15: Regulatory information

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

SARA 313 Components

Does not contain listed substances.

Massachusetts Right To Know Components

- Sodium hydroxide - CAS No.: 1310-73-2

Pennsylvania Right To Know Components

- Sodium hydroxide - CAS No.: 1310-73-2

New Jersey Right To Know Components

- Sodium hydroxide - CAS No.: 1310-73-2

California Prop. 65 Components

Does not contain listed substances.

SECTION 16: Other information

Abbreviations and acronyms

H300 - Fatal if swallowed.

H310 - Fatal in contact with skin.

H314 - Causes severe skin burns and eye damage.

H330 - Fatal if inhaled.

H373 - May cause damage to organs through prolonged or repeated exposure.

ACGIH - American Conference of Governmental Industrial Hygienists

DOT - Department of Transportation

IARC - International Agency for Research on Cancer

IATA-DGR - International Air Transport Association-Dangerous Goods Regulations

ICAO-TI - International Civil Aviation Organization-Technical Instructions

IMDG - International Maritime Code for Dangerous Goods

LTV - Long Term Value

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - Occupational Safety & Health Administration

PBT - Persistent, Bioaccumulative and Toxic

PEL - Permissible Exposure Limit

STV - Short Term Value

SVHC - Substances of Very High Concern

TDG - Transport of Dangerous Goods

TLV - Threshold Limit Value

vPvB - very Persistent, very Bioaccumulative

Training advice: Provide adequate information, instruction and training for operators.

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

Hazard statements	Hazard classes and hazard categories	Classification procedure
H290	Met. Corr. 1	Data obtained by expert judgement.
H310	Acute Tox. 1	Calculation method.
H300	Acute Tox. 2	Calculation method.
H314	Skin Corr. 1A	Calculation method.
H318	Eye Dam. 1	Calculation method.
H373	STOT RE 2	Calculation method.

Additional information

Indication of changes general update

If you need an explanation of the change, contact the supplier. (SDS@avantorsciences.com)

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.