



Safety Data Sheet
According to Regulation (EC) 1907/2006
and (EU) 453/2010

1581 Nessler's Reagent

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

1.1 Product identifier

Name:

Nessler's Reagent

Synonym:

di-Potassium tetra-Iodomercurate(II), Potassium Tetraiodomercurate(II)

REACH Registration Number: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) N° 1907/2006, the annual tonnage does not require a registration, the registration is envisaged for a later registration deadline or it is a mixture.

1.2 Relevant identified uses of the substance or mixture:

For laboratory utilisation, analysis, research and fine chemistry.

1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: product.safety@panreac.com

1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

2. Identification of dangers

2.1 Classification of the substance or the mixture.

Classification Regulation (CE) nº 1272/2008.

Acute Tox. 2
Skin Corr. 1B
STOT RE 1
Aquatic Chronic 3

Classification (67/548/CEE or 1999/45/CE).

T+ Very toxic

R52
R48/24/25
R34
R28

2.2 Label elements:

Hazard Pictograms



Signal word

Danger

Hazard statements

H300 Fatal if swallowed.
H314 Causes severe skin burns and eye damage.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash...thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection or face protection.
P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

For the full text of the R-phrases mentioned in this section, see section 16.

2.3 Other hazards:

No further relevant information available.

3. Composition/information on ingredients

Aqueous solution with inorganic components.

Name: Nessler's Reagent

COMPOSITION:

0001: Mercury(II) Iodide *red

Formula: HgI₂ M.= 454,40 CAS [7774-29-0]

EC number (EINECS): 231-873-8

EC index number: 080-002-00-6

Content: >= 5 % <= 15 %

Classification Regulation (CE) n° 1272/2008.

Acute Tox. 2

Acute Tox. 1

Acute Tox. 2

Aquatic Acute 1

Aquatic Chronic 1

Hazard Pictograms



Signal word

Danger

Hazard statements

H330 Fatal if inhaled.

H310 Fatal in contact with skin.

H300 Fatal if swallowed.

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

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash...thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection or face protection.
P284 Wear respiratory protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P320 Specific treatment is urgent (see on this label).
P321 Specific treatment (see on this label).
P322 Specific measures (see on this label).
P330 Rinse mouth.
P361 Remove/Take off immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Classification (67/548/CEE or 1999/45/CE).

N Dangerous for the environment	R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
T+ Very toxic	R33 Danger of cumulative effects.
	R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

0002: Sodium Hydroxide pellets

Formula: NaOH M.= 40,00 CAS [1310-73-2]
EC number (EINECS): 215-185-5
EC index number: 011-002-00-6
REACH Registration Number: 01-2119457892-27-XXXX

Content: >= 7 % <= 15 %

Classification Regulation (CE) n° 1272/2008.

Skin Corr. 1A
Met. Corr. 1

Hazard Pictograms



Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

H290 May be corrosive to metals.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves, protective clothing, eye protection or face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/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 or doctor/physician.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

Classification (67/548/CEE or 1999/45/CE).

C Corrosive

R35 Causes severe burns.

4. First aid measures

4.1 General indications:

Never provide drink or induce vomiting in the event of loss of consciousness.

4.2 Inhaling:

Take the person out into the fresh air. In the event sickness persists, seek medical assistance.

4.3 Contact with the skin:

Wash with plenty of water. Remove contaminated clothing. Take the product out with cotton wool soaked in polyethylene-glycol 400.

4.4 Eyes:

Wash with plenty of water (for at least 15 minutes), keeping eyelids open. Seek immediate medical assistance.

4.5 Swallowing:

Drink large amounts of water. Avoid vomiting (there is a risk of perforation). Seek immediate medical assistance. Do not neutralize. Stomach lavage.

5. Firefighting measures

5.1 Suitable extinguishing media:

As appropriate to the environment.

5.2 Unsuitable extinguishing media:

No specific data.

5.3 Special hazards arising from the substance or mixture:

Incombustible.

5.4 Advice for firefighters:

Suitable clothing and footwear.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid contact with the skin, eyes or clothing. Do not inhale the fumes.

6.2 Environmental precautions:

Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

6.3 Methods and material for containment and cleaning up:

Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

7. Handling and storage

7.1 Precautions for safe handling:

No special indications.

7.2 Conditions for safe storage, including any incompatibilities:

Well sealed containers. In well ventilated premises. Restricted access, only authorized to technicians.

Recommended storage temperature: Room temperature.

8. Exposure controls/personal protection

8.1 Exposure controls:

No special indications.

8.2 Control parameters:

Data not available.

8.3 Respiratory protection:

In the event of fumes forming/aerosols, use suitable respiratory protection. Filter B3.

8.4 Hand protection:

Use suitable gloves (neopren, PVC)

8.5 Eye/face protection:

Use safety glasses.

8.6 Individual hygiene measures:

Remove contaminated clothing. Use suitable work clothing. Wash hands and face before breaks and when the job is done. Do not eat, drink or smoke in the workplace.

8.7 Environmental exposure controls:

Fulfill the commitments under local environmental protection legislation.

9. Physical and chemical properties

Appearance: liquid

Colour: Yellowish

Granulometry: N/A

Odour: Odourless.

pH: >13

Melting point/freezing point: N/A

Initial boiling point and boiling range:
N/A

Flash point:

N/A

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits:

N/A

Vapour pressure: N/A

Vapour density: N/A

Relative density:

Insertar Aquí Grupo de repetición

(20/4) 1,272 g/ml

Solubility: in () Miscible with water

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature:

N/A

Decomposition temperature: N/A

Kinematic viscosity: N/A

Dynamic viscosity:

N/A

10. Stability and reactivity

10.1 Conditions to avoid:

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

10.2 Incompatible materials:

No specific data.

10.3 Hazardous decomposition products:

No specific data.

10.4 Chemical stability:

No specific data.

11. Toxicological information

11.1 Acute toxicity:

: Data not available.

11.2 Dangerous effects for health:

No specific data on this preparation known with regard to effects of overdose in humans. Taking the preparation' components into account, the likely dangerous characteristics are as follows: Upon contact with the skin: burns Risk of sensitization allergic reaction Through contact with the eyes: burns If swallowed: Irritations of the mucosae in the mouth, throat, oesophagus and intestinal tract. Risk of perforation in the oesophagus and stomach. Mercury compounds have toxic effects on cells and protoplasts. Symptoms due to acute intoxication of (Hg): Through contact with the eyes: Serious injuries If swallowed and inhaled: Tissue injuries (mouth, oesophagus, stomach and intestinal tract). Metallic taste nausea vomiting stomach pains intestinal disorders Burns in the digestive apparatus oedemas in the respiratory tract pneumonia. Causes blood alterations arrhythmia collapse kidney problems Chronic effects Buccal infections, mercury halo, risk of loss of teeth. Risk of effects on the central nervous system sensitization sight disorders hallucinations dizziness Other dangerous characteristics are not discarded. Take the usual precautions for handling chemical products.

12. Environmental information

12.1 Toxicity:

- EC50 test (mg/l):

Bacteria (*Photobacterium phosphoreum*) (Hg) 0,046 mg/l

Classification: Extr. toxic

Algae (*Sc. quadricauda*) (Hg) 0,07 mg/l

Classification: Extr. toxic

Algae (*M. aeruginosa*) (Hg) 0,005 mg/l

Classification: Extr. toxic

Fish (*Salmonidae*) (Hg) 0,05 mg/l

Classification: Extr. toxic

Fish (*P. promelas*) (Hg) 0,19 mg/l

Classification: Extr. toxic

Fish (*Leuciscus Idus*) (Hg) 0,013 mg/l

Classification: Extr. toxic

Crustaceans (*Daphnia magna*) (KI) 2,7 mg/l

Protozoa (*E. sulcatum*) (KI) 40 mg/l

- Receptor medium:

Risk for the water environment

High

Risk for the land environment High

- Observations:

The ecotoxicity is due to the mercury ion.

Ecotoxic for water and land organisms due to the pH deviation. Major acute effects in the dumping area.

Toxic product in any environment. Ecotoxicity acute and chronic.

12.2 Persistence and Degradability :

- Test:

- Biotic degradation classification:

BOD5/COD

Biodegradability

- Abiotic degradation depending on pH:

- Observations:

12.3 Bioaccumulative potential:

- **Test:**

- **Bioaccumulation:**

Risk = High

- **Observations:**

The mercury ion is bioaccumulable in the food chain.

12.4 Mobility in soil :

Data not available.

12.5 Assessment PBT and MPMB :

Data not available.

12.6 Other adverse effects:

High pollutant product.

Do not allow it to enter soils or water channels.

13. Disposal considerations

13.1 Waste treatment methods:

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes. Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

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13.2 Contaminated containers:

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

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14. Transport information

Overland (ADR):

Technical name: CORROSIVE LIQUID, TOXIC, N.O.S.

UN 2922 Class: 8 6.1 CONTAM. MAR Packaging group: II (E)

By sea (IMDG):

Technical name: CORROSIVE LIQUID, TOXIC, N.O.S.

UN 2922 Class: 8 6.1 CONTAM. MAR Packaging group: II

By air (ICAI-IATA):

Technical name: Corrosive liquid, toxic, n.o.s.

UN 2922 Class: 8 6.1 CONTAM. MAR Packaging group: II

Packaging instructions: CAO 855 PAX 851

15. Regulatory information

The substance is subject to Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals.

16. Other information

Other precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P310 Immediately call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.

Labelling (65/548/CEE or 1999/45/CE)

R-phrase(s):	R52 Harmful to aquatic organisms. R48/24/25 Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. R34 Causes burns. R28 Very toxic if swallowed.
S-phrase(s):	S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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In respect of the previous review, changes have been made to the following sections: 14

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.