

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
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MATERIAL SAFETY DATA SHEET (MSDS)

NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)

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

1.1. Product identifier

Trade name : NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)

Product code : SI0308900250
 CAS No: 7783-33-7

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

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : SUVCHEM
 Chaitanya Tower, 2nd Floor, Office # 206,
 Siddharth Nagar, S.V. Road,
 Goregaon (West), Mumbai - 400062,
 Maharashtra, India.
 Contact: +91 22 28725393 / 94 / 95
 Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : T; R25
 Xn; 48/21/22
 C; R35
 N; R51-53

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Repeated exposure - Category 2 - Warning (CLP : STOT RE 2) H373
 Skin corrosion - Category 1A - Danger (CLP : Skin Corr. 1A) H314
 Acute toxicity, Oral - Category 2 - Danger (CLP : Acute Tox. 2) H300

Environmental hazards : Hazardous to the aquatic environment - Chronic hazard - Category 2 (CLP : Aquatic Chronic 2) H411

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

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NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)
2. Hazards identification -DSD (continued)
Symbol(s)

Symbol(s)

 : T : Toxic
 C : Corrosive
 N : Dangerous for the environment

R Phrase(s)

 : R25 : Toxic if swallowed.
 R35 : Causes severe burns.
 R48/21/22 : Harmful : danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
 R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrase(s)

 : S4 : Keep away from living quarters.
 S24 : Avoid contact with skin.
 S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S28 : After contact with skin, wash immediately with
 S35 : This material and its container must be disposed of in a safe way.
 S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection.
 S38 : In case of insufficient ventilation, wear suitable respiratory equipment.
 S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).
 S57 : Use appropriate container to avoid environmental contamination.
 S59 : Refer to manufacturer/supplier for information on recovery/recycling.
 S60 : This material and its container must be disposed of as hazardous waste.
 S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.

Contains

: Water - Potassium hydroxide - Yoduro potásico - MERCURIC CHLORIDE AR 99.5%

Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms

Signal words

: Danger

Hazard statements

 : H300 : Fatal if swallowed.
 H314 : Causes severe skin burns and eye damage.
 H373 : May cause damage to organs through prolonged or repeated exposure.
 H411 : Toxic to aquatic life with long lasting effects.

Precautionary statements
• Prevention

 : P280: Wear protective gloves, protective clothing, eye protection, face protection.
 P260: Do not breathe dust, fume, gas, mist, vapours, spray.
 P273: Avoid release to the environment.
 P264: Wash thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.

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2. Hazards identification -DSD (continued)

- **Response** : P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.
 P391: Collect spillage.
 P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.
 P363: Wash contaminated clothing before reuse.
 P314: Get medical advice if you feel unwell.
- **Storage** : P405: Store locked up.
- **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains** : Water - Potassium hydroxide - Yoduro potásico - MERCURIC CHLORIDE AR 99.5%

2.3. Other hazards

- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation		: Preparation.				
Hazardous component(s)		: This product is hazardous.				
Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
MERCURIC CHLORIDE AR 99.5% :	> 1 < 5 %	787-94-7	-----	-----	----	R68 Xn; R62 T+; R28 T; R48/24/25 Xn; 68 C; R34 N; R50-53 Acute Tox. 1 (oral) _ H300 Skin Corr. 1B _ H314 STOT RE 1 _ H372 STOT SE 2 _ H371 Aquatic Acute 1 _ H400 Aquatic Chronic 1 _ H410
Yoduro potásico :	> 5 < 10 %	7681-11-0	-----	-----	----	Xn; R22 Xi; R36/38 Acute Tox. 4 (oral) _ H302 Eye irrit. 2 _ H319 Skin Irrit. 2 _ H315
Potassium hydroxide :	> 10 < 15 %	1310-58-3	215-181-3	019-002-00-8	----	Xn; R22 C; R35 Skin Corr. 1A+ _ H314 Eye Dam 1 _ H318 Acute Tox. 4 (oral) _ H302
Water :	> 75 < 99 %	7732-18-5	231-791-2	-----	----	Not classified (DSD/DPD) Not classified (GHS)

MATERIAL SAFETY DATA SHEET (MSDS)

NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)

4. First aid measures

4.1. Description of first aid measures

Inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
Skin contact	: Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.
Eye contact	: Immediately call a POISON CENTER or doctor. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
Ingestion	: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. Specific treatment (see on this label).

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

Symptoms relating to use	: Causes damage to organ. Fatal if swallowed. Causes severe skin burns and eye damage.
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4.3. Indication of any immediate medical attention and special treatment needed

General information	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
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5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
Surrounding fires	: Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	: Under fire conditions, hazardous fumes will be present. Thermal decomposition generates : Corrosive vapours.
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5.3. Advice for fire-fighters

Protection against fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Special procedures	: Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

MATERIAL SAFETY DATA SHEET (MSDS)

NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- For emergency responders** : Equip cleanup crew with proper protection.
Ventilate area.
- For non-emergency personnel** : Evacuate unnecessary personnel.

6.2. Environmental precautions

- Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling

- Handling** : Wash thoroughly after handling. Avoid contact during pregnancy or while nursing.
Do not breathe dust, fume, gas, mist, vapours, spray.
- Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour.
- Special precautions** : Avoid breathing dust, fume, gas, mist, vapours, spray.

7.2. Conditions for safe storage, including any incompatibilities

- Storage** : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
- Storage regulation** : Comply with applicable regulations.
- Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

- Specific end use(s)** : None.

MATERIAL SAFETY DATA SHEET (MSDS)
NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)
8. Exposure controls/personal protection
8.1. Exposure controls
Personal protection

Personal protection

- Respiratory protection
- Hand protection
- Skin protection
- Eye protection
- Others

- : Avoid all unnecessary exposure.
- : Wear approved mask.
- : Wear protective gloves.
- : Wear suitable protective clothing.
- : Chemical goggles or face shield.
- : When using, do not eat, drink or smoke.

8.2. Control parameters
Occupational Exposure Limits

: No data available.

Occupational Exposure Limits

 : Potassium hydroxide : OEL (UK)-STEL [ppm] : 2
 Potassium hydroxide : HTP-värden - 8 H - [mg/m³] : 2
 Potassium hydroxide : NGV - [mg/m³] : 1
 Potassium hydroxide : VLA-EC [mg/m³] : 2

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Liquid.
Colour	: Colorless
Odour	: Characteristic.
Odour threshold	: No data available.
pH value	: No data available.
Melting point [°C]	: No data available.
Decomposition point [°C]	: N/A
Critical temperature [°C]	: No data available.
Auto-ignition temperature [°C]	: No data available.
Flammability (solid, gas)	: N/A
Flash point [°C]	: No data available.
Boiling point [°C]	: 1050C
Initial boiling point [°C]	: No data available.
Final boiling point [°C]	: No data available.
Evaporation rate	: N/A

MATERIAL SAFETY DATA SHEET (MSDS)
NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)
9. Physical and chemical properties (continued)

Vapour pressure [20°C]	: No data available.
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm ³]	: 1,15
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Miscible in water
Solubility in water	: No data available.
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm ² /s]	: No data available.

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: No data available.
Explosion limits - lower [%]	: No data available.
Oxidising properties	: No data available.

10. Stability and reactivity
10.1. Reactivity

Reactivity	: Not established.
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10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
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10.4. Conditions to avoid

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures.
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10.5. Incompatible materials

Materials to avoid	: Strong acids. Strong bases.
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10.6. Hazardous decomposition products

MATERIAL SAFETY DATA SHEET (MSDS)
NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)
10. Stability and reactivity (continued)

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.
 Thermal decomposition generates : Corrosive vapours.

11. Toxicological information
11.1. Information on toxicological effects

Toxicity information : The product has been not fully tested. The calculated risk has been done under the requirements of the EU regulations.

Acute toxicity

- **Inhalation** : Based on available data, the classification criteria are not met.
- **Dermal** : Based on available data, the classification criteria are not met.
- **Ingestion** : Fatal if swallowed.

Corrosion : Causes severe skin burns and eye damage.

Irritation : Based on available data, the classification criteria are not met.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : 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 : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information
12.1. Toxicity

Toxicity information : Toxic to aquatic life with long lasting effects.

12.2. Persistence - degradability

Persistence - degradability : May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

MATERIAL SAFETY DATA SHEET (MSDS)

NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)

12. Ecological information (continued)

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

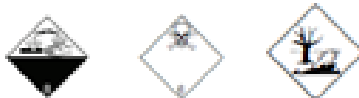
General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Special precautions : Hazardous waste due to toxicity.

14. Transport information

14.1. Land transport (ADR-RID)

Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.
UN N° : 2922
H.I. nr : 86
ADR - Class : 8
Labelling - Transport : 8 : Corrosive substance. 6.1 : Toxic substances. 9 : Miscellaneous dangerous substances and articles.



ADR - Classification code : CT1
ADR - Group : II
ADR - Packing instructions : P001
ADR - Limited Quantity : 1 L
ADR - Tunnel code : E : Passage forbidden through tunnels of category E.



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14. Transport information (continued)
14.2. Sea transport (IMDG).[English only]

Proper shipping name	: CORROSIVE LIQUID, TOXIC, N.O.S.
UN N°	: 2922
IMO-IMDG - Class or division	: 8 : Corrosive substance. (6.1 : Toxic substances.) (9 : Miscellaneous dangerous substances and articles.)
IMO-IMDG - Packing group	: II
IMO- IMDG - Packing instructions	: P001
IMO-IMDG - Limited quantities	: 1 L
IMO-IMDG - Marine pollution	: Yes
EMS-Nr	: F-A S-B

14.3. Air transport (ICAO-IATA).[English only]

Proper shipping name	: CORROSIVE LIQUID, TOXIC, N.O.S.
UN N°	: 2922
IATA - Class or division	: 8 : Corrosive substance. (6.1 : Toxic substances.) (9 : Miscellaneous dangerous substances and articles.)
IATA - Packing group	: II
IATA - Passenger and Cargo Aircraft	: ALLOWED
- Passenger and Cargo - Packing instruction	: 851
- Passenger and Cargo - Maximum Quantity/Packing	: 1 L
IATA - Cargo only	: ALLOWED
- Cargo only - Packing instruction	: 855
- Cargo only - Maximum Quantity/ Packing	: 30 L
IATA - Limited Quantities	: 0.5 L
ERG-Nr	: 8P

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

Safety, health and environmental regulations/legislation specific for the substance or mixture	: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII	: The components of this product are not subject to restrictions.
REACH Authorisation - Annex XIV	: The components of this product are not subject to authorization.

MATERIAL SAFETY DATA SHEET (MSDS)
NESSLER'S REAGENT (FOR AMMONIA & AMMONIUM SALT)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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