

NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1
Page 1 of 10

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

NESSLER'S REAGENT

OTHER NAMES

"Nessler's Reagent, For Detection of Ammonia and ammonium compound."

PROPER SHIPPING NAME

CORROSIVE LIQUID, TOXIC, N.O.S.(contains potassium hydroxide and potassium tetraiodomercurate(II))

PRODUCT USE

■ Used according to manufacturer's directions.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V.Ind.Estate,

248, Worli Road,

Mumbai- 400030, India

www.sdfine.com

Telephone: 91- 22 24959898/99

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Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity Category 1

Acute Toxicity Category 1

Acute Toxicity Category 2

Chronic Aquatic Hazard Category 2

Metal Corrosion Category 1

Serious Eye Damage Category 1

Skin Corrosion/Irritation Category 1A

STOT - RE Category 2



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria

H290	May be corrosive to metals.
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

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NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 2 of 10

Section 2 - HAZARDS IDENTIFICATION

PRECAUTIONARY STATEMENTS

Prevention

Code	Phrase
P234	Keep only in original container.
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.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

Response

Code	Phrase
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
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.
P320	Specific treatment is urgent (see MSDS).
P330	Rinse mouth.
P361	Remove/Take off immediately all contaminated clothing.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.

Storage

Code	Phrase
P403+P233	Store in a well- ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container or with a resistant inner liner.

Disposal

Code	Phrase
P501	Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
potassium hydroxide	1310-58-3	10-15
potassium tetraiodomercurate(II)	7783-33-7	5-10
water	7732-18-5	75-85

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

- If this product comes in contact with the eyes:
- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

SKIN

- If skin or hair contact occurs:

continued...

NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 3 of 10

Section 4 - FIRST AID MEASURES

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.
- Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
- As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.
- Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

NOTES TO PHYSICIAN

- Treat symptomatically.
 - Moderate adsorption of inorganic mercury compounds through the gastro-intestinal tract (7-15%) is the principal cause of poisoning. These compounds are highly concentrated (as the mercuric (Hg (2+)) form) in the kidney; acute ingestion may lead to oliguric renal failure. Severe mucosal necrosis may also result from ingestion.
 - Chronic effects range from proteinuria to nephrotic syndrome. Chronic presentation also involves dermatitis, gingivitis, stomatitis, tremor and neuropsychiatric symptoms of erethism.
 - Absorbed inorganic mercury does not significantly cross the blood-brain barrier.
 - Emesis and lavage should be initiated following acute ingestion.
- For acute or short-term repeated exposures to highly alkaline materials:
- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
 - Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
 - Oxygen is given as indicated.
 - The presence of shock suggests perforation and mandates an intravenous line and fluid administration.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.

FIRE/EXPLOSION HAZARD

- May emit corrosive fumes.

FIRE INCOMPATIBILITY

- None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- Check regularly for spills and leaks.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

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NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 4 of 10

Section 6 - ACCIDENTAL RELEASE MEASURES

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.

SUITABLE CONTAINER

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure. <</>.

STORAGE INCOMPATIBILITY

- Sodium hydroxide/ potassium hydroxide:
 - reacts with water evolving heat and corrosive fumes
- reacts violently with acids, trans-acetylene dichloride, aminotetrazole, p-bis(1,3-dibromoethyl), benzene, bromoform, halogenated compounds, nitrogen-containing compounds, organic halogens, chlorine dioxide ((explodes), chloroform, cresols, cyclopentadiene, 4-chloro-2-methylphenol, cis-dichloroethylene, 2,2-dichloro-3,3-dimethylbutane, ethylene chlorohydrin, germanium, iodine pentafluoride, maleic anhydride, p-nitrotoluene, nitrogen trichloride, o-nitrophenol, phosphonium iodide, potassium peroxodisulfate, propylene oxide, 1,2,4,5-tetrachlorobenzene (highly toxic substance is forme), 2,2,3,3-tetrafluoro-1-propanol, tetrahydrofuran, thorium dicarbide, trichloroethanol, 2,4,6-trinitrotoluene, vinyl acetate
- reacts with fluorine, nitroalkanes, (forming explosive compounds)
- incompatible with acetic acid, acetaldehyde, acetic anhydride, acrolein, acrylonitrile, allyl chloride, organic anhydride, acrylates, alcohols, aldehydes, alkylene oxides, substituted allyls, ammonium chloroplatinate, benzanthrone, bromine, benzene-1,4-diol, carbon dioxide, cellulose nitrate, chlorine trifluoride, 4-chlorobutyronitrile, chlorohydrin, chloronitrotoluenes, chlorosulfonic acid, cinnamaldehyde, caprolactam solution, chlorocresols, 1,2-dichloroethylene, epichlorohydrin, ethylene cyanohydrin, formaldehyde (forms formic acid and flammable hydrogen gas), glycols, glyoxal, hexachloroplatinate, hydrogen sulfide, hydroquinone, iron-silicon, isocyanates, ketones, methyl azide, 4-methyl-2-nitrophenol, mineral acids (forming corresponding salt), nitrobenzene, N-nitrosohydroxylamine, nitrates pentol, phenols, phosphorus, phosphorus pentaoxide, beta-propiolactone, sodium, sulfur dioxide, tetrahydroborate, 1,1,1,2-tetrachloroethane, 2,2,2-trichloroethanol, trichloronitromethane, zirconium.
- WARNING: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively.
- The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono-or poly-fluorobenzene show extreme sensitivity to heat and are explosive.
- Avoid reaction with borohydrides or cyanoborohydrides.
- Reacts vigorously with acids.
- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- Avoid contact with copper, aluminium and their alloys.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- DO NOT store near acids, or oxidising agents.
- No smoking, naked lights, heat or ignition sources.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	Notes
India Permissible Levels of Certain Chemical Substances in Work Environment	potassium tetraiodomercurate(II) (Mercury (as Hg) (ii) All forms except alkyl vapour)	0.05	Skin

The following materials had no OELs on our records

- potassium hydroxide: CAS:1310- 58- 3
- water: CAS:7732- 18- 5

MATERIAL DATA

POTASSIUM HYDROXIDE:

SIGMA-ALDRICH NESSLER'S REAGENT, FOR DETECTION OF AMMONIA:

- for potassium hydroxide:

The TLV-TWA is protective against respiratory tract irritation produced at higher concentrations.

POTASSIUM TETRAIODOMERCURATE(II):

■ It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience).

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

NOTE: Inorganic mercury and its salts has been classified by the ACGIH as A4 NOT classifiable as a Human Carcinogen.

The counter ion may, however, be a carcinogen.

Some jurisdictions require that health surveillance be conducted on occupationally exposed workers. Such surveillance should emphasise

- demography, occupational and medical history and advice.

WATER:

- No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION



RESPIRATOR

•Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure
- Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted
- Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.
- Alternatively a gas mask may replace splash goggles and face shields.

HANDS/FEET

- Elbow length PVC gloves.
- When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical 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.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

continued...

NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 6 of 10

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Liquid; mixes with water.

PHYSICAL PROPERTIES

Mixes with water.

Corrosive.

Alkaline.

Toxic or noxious vapours/gas.

State	LIQUID	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Miscible
Flash Point (°C)	112.77	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	1.097
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

Acute toxicity	Acute Tox. (dermal) 1 Acute Tox. (inhal) 1 Acute Tox. (oral) 2
Skin corrosion/irritation	Skin Corr. 1 A
Serious eye damage/irritation	Eye Dam. 1
Respiratory or skin sensitization	Not applicable
Germ cell mutagenicity	Not applicable
Carcinogenicity	Not applicable
Reproductive toxicity	Not applicable
STOT- single exposure	Not applicable
STOT- repeated exposure	STOT RE 2
Aspiration hazard	Not applicable

POTENTIAL HEALTH EFFECTS

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NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 7 of 10

Section 11 - TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

SWALLOWED

- Severely toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 5 gram may be fatal or may produce serious damage to the health of the individual.
 - Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow.
- Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow.

EYE

- If applied to the eyes, this material causes severe eye damage.
 - Direct eye contact with corrosive bases can cause pain and burns.
- There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris.

SKIN

- Skin contact with the material may produce severely toxic effects; systemic effects may result following absorption and these may be fatal.
 - The material can produce severe chemical burns following direct contact with the skin.
 - Potassium hydroxide burns are not immediately painful; onset of pain may be delayed minutes or hours; thus care should be taken to avoid contamination of gloves and boots.
 - Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop.
- The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep.
- Open cuts, abraded or irritated skin should not be exposed to this material.
 - Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
- Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

- Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce severely toxic effects; these may be fatal.
 - The material can cause respiratory irritation in some persons.
- The body's response to such irritation can cause further lung damage.
- Inhaling corrosive bases may irritate the respiratory tract.
- Symptoms include cough, choking, pain and damage to the mucous membrane.
- Inhalation of potassium hydroxide dust may be fatal due to spasm, throat pain, redness, hoarseness of voice, and difficulty in swallowing and breathing.
- There may be inflammation with accumulation of fluid in the lungs.
- Inhalation of dusts, generated by the material, during the course of normal handling, may produce severely toxic effects; these may be fatal.

CHRONIC HEALTH EFFECTS

- Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis.
- Substance accumulation, in the human body, is likely and may cause some concern following repeated or long-term occupational exposure.
- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
- Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
- This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. This has been demonstrated via both short- and long-term experimentation.
- There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.
- Based on experience with animal studies, there is a possibility that exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.
- Iodine and iodides, may give rise to local allergic reactions such as hives, rupture of skin blood vessels, pain in joints or diseases of the lymph nodes.
- Mercury easily crosses the placenta and causes birth defects. Chronic exposure results in excess saliva production, loss of appetite, stomach upset, vague abdominal discomfort and mild diarrhoea. The kidneys are rarely involved. Chronic mercury poisoning usually shows itself mainly as effects on the nervous system, especially the central nervous system. There may be tremors involving the hands and fingers, eyelids, cheeks, legs and tongue. Motor control may be impaired, leading to slurred or scanning speech and inco-ordinated walking. Disturbance with seeing or hearing may occur. There may be behaviour changes such as depression, despondency and fearfulness, often accompanied by sleep disturbance, headache and fatigue. Advanced cases show memory loss, hallucinations and deterioration in mental function. Other symptoms include a constant metallic taste, and various levels of gum inflammation, leading to periodontal disease and loosening of teeth. A dark blue line may occur along the gum margins. Uncommonly, a syndrome known as acrodynia ("pink disease") may occur, of which the major symptom is itchy scaling of the hands and feet.
- Iodine and iodides cause goitre and diminished as well as increased activity of the thyroid gland. A toxic syndrome resulting from chronic iodide overdose and from repeated administration of small amounts of iodine is characterised by excessive saliva production, head cold, sneezing, conjunctivitis, headache, fever, laryngitis, inflammation of the bronchi and mouth cavity, inflamed parotid gland, and various skin rashes. Swelling and inflammation of the throat, irritated and swollen eyes and lung swelling may also occur. Swelling of the glottis, necessitating a tracheotomy has been reported. Use of iodides in pregnancy can cause foetal death, severe goitre, hypothyroidism and the cretinoid appearance of the newborn.

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NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 8 of 10

Section 11 - TOXICOLOGICAL INFORMATION

TOXICITY AND IRRITATION

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

No significant acute toxicological data identified in literature search.

CARCINOGEN

potassium tetraiodomercurate (II)	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group 3	Not classifiable as to its carcinogenicity to humans
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SKIN

potassium hydroxide	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	3C
potassium tetraiodomercurate(II)	India Permissible Levels of Certain Chemical Substances in Work Environment - Skin	Notes	Skin

Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
potassium hydroxide	No Data Available	No Data Available	LOW	No Data Available
potassium tetraiodomercurate(II)	No Data Available	No Data Available	No Data Available	No Data Available

Section 13 - DISPOSAL CONSIDERATIONS

• Containers may still present a chemical hazard/ danger when empty.

• Return to supplier for reuse/ recycling if possible.

Otherwise:

• If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

• Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

• Reduction.

• DO NOT allow wash water from cleaning or process equipment to enter drains.

• It may be necessary to collect all wash water for treatment before disposal.

• In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

• Where in doubt contact the responsible authority.

• Recycle wherever possible.

• Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

• Treat and neutralise at an approved treatment plant.

• Treatment should involve: Neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).

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Section 14 - TRANSPORTATION INFORMATION



Labels Required: CORROSIVE, TOXIC

HAZCHEM:
2X

Land Transport UNDG:

Class or division:	8	Subsidiary risk:	6.1
UN No.:	2922	UN packing group:	II

Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains potassium hydroxide and potassium tetraiodomercurate(II))

Air Transport IATA:

ICAO/IATA Class:	8	ICAO/IATA Subrisk:	6.1
UN/ID Number:	2922	Packing Group:	II
Special provisions:	A3A803		

Shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains potassium hydroxide and potassium tetraiodomercurate(II))

Maritime Transport IMDG:

IMDG Class:	8	IMDG Subrisk:	6.1
UN Number:	2922	Packing Group:	II
EMS Number:	F- A, S- B	Special provisions:	274
Limited Quantities:	1 L	Marine Pollutant:	Yes

Shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains potassium hydroxide and potassium tetraiodomercurate(II))

Section 15 - REGULATORY INFORMATION

REGULATIONS

Regulations for ingredients

potassium hydroxide (CAS: 1310-58-3) is found on the following regulatory lists;

"Acros Transport Information", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "Fisher Transport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "India Hazardous Wastes (Management, Handling and Transboundary Movement) Rules - Schedule 2: List of Wastes Constituents with Concentration Limits", "India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 1: List of Hazardous and Toxic Chemicals", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Numbering System for Food Additives", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-Aldrich Transport Information"

potassium tetraiodomercurate(II) (CAS: 7783-33-7) is found on the following regulatory lists;

"Fisher Transport Information", "India Hazardous Wastes (Management, Handling and Transboundary Movement) Rules - Schedule 2: List of Wastes Constituents with Concentration Limits", "India Permissible Levels of Certain Chemical Substances in Work Environment", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "Sigma-Aldrich Transport Information", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "United Nations List of Prior Informed Consent Chemicals"

water (CAS: 7732-18-5) is found on the following regulatory lists;

"IMO IBC Code Chapter 18: List of products to which the Code does not apply", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution - Norway", "Sigma-Aldrich Transport Information"

No data for Sigma-Aldrich Nessler's Reagent, For Detection of Ammonia (CW: 1292518)

Section 16 - OTHER INFORMATION

- Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

continued...

NESSLER'S REAGENT

GHS Safety Data Sheet

Version No:2.1.1.1

Page 10 of 10

Section 16 - OTHER INFORMATION

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- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue date: 16-June 2018