

OTTO CHEMIE PVT LTD

An ISO 9001 : 2015 & GMP Certified Company
101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841
Email : info@ottokemi.com Web : www.ottokemi.com

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Nessler's (King) reagent
Product Code: N 1429
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
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email info@ottokemi.com

1.4. Emergency telephone number

Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Corrosive to Metals, (Category 1)

Acute toxicity, (Category 3)

Skin corrosion, (Sub-category
1A)

Serious eye damage, (Category
1)

Germ cell mutagenicity,
(Category 2)

Specific target organ toxicity -
repeated exposure, (Category 2)

Specific target organ toxicity -
repeated exposure, (Category 2),

Short-term (acute) aquatic
hazard, (Category 1)

Long-term (chronic) aquatic
hazard, (Category 2)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H290

H301

H314

H341

H373

H373

repeated exposure if swallowed.

H410

Precautionary Statements

P202

P273

P280

P303 + P361 + P353

H290: May be corrosive to metals.

H301: Toxic if swallowed.

H314: Causes severe skin burns and eye
damage.

H318: Causes serious eye damage.

H341: Suspected of causing genetic
defects.

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

H373: May cause damage to organs
Thyroid through prolonged or repeated exposure if
swallowed.

H400: Very toxic to aquatic life.

H411: Toxic to aquatic life with long lasting
effects.

Danger

May be corrosive to metals.

Toxic if swallowed.

Causes severe skin burns and eye damage.

Suspected of causing genetic defects.

May cause damage to organs through prolonged or repeated
exposure.

May cause damage to organs (Thyroid) through prolonged or

Very toxic to aquatic life with long lasting effects.

Do not handle until all safety precautions have been read and
understood.

Avoid release to the environment.

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

IF ON SKIN (or hair): Take off immediately all contaminated

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P304 + P340 + P310

P305 + P351 + P338

Supplemental Hazard
Statements
Reduced Labeling (<= 125 ml)
Pictogram
Signal Word
Hazard Statements
H301
H341
H314
Precautionary Statements
P202

P280

P303 + P361 + P353

P304 + P340 + P310

P305 + P351 + P338

Supplemental Hazard
Statements
2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Rapidly absorbed through skin., Danger of cumulative effects.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms : Dipotassium tetraiodomercurate(II) in dilute sodium hydroxide
Formula : K_2HgI_4
Molecular weight : 786,4 g/mol

clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
none

Danger

Toxic if swallowed.
Suspected of causing genetic defects.
Causes severe skin burns and eye damage.

Do not handle until all safety precautions have been read and understood.

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

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
none

Component	Classification	Concentration
caustic potash		
CAS-No. 1310-58-3 EC-No. 215-181-3	Met. Corr. 1; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; H290, H302, H314, H318 Concentration limits: >= 5 %: Skin Corr. 1A, H314; 2 - < 5 %: Skin Corr. 1B, H314; 0,5 - < 2 %: Skin Irrit. 2, H315; 0,5 - < 2 %: Eye Irrit. 2, H319; >= 0,5 %: Met. Corr. 1, H290;	>= 10 - < 20 %

*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) No 1907/2006,

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the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas

Hydrogen iodide

Potassium oxides

Mercury/mercury oxides.

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g.

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Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

No metal containers.

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

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

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection
required

Body Protection
protective clothing

Respiratory protection
required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	liquid
b) Color	No data available
c) Odor	No data available
d) Melting point/freezing point	No data available
e) Initial boiling point and boiling range	No data available
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or	No data available

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explosive limits

h) Flash point

Not applicable

i) Autoignition

Not applicable

temperature

j) Decomposition

No data available

temperature

k) pH

No data available

l) Viscosity

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

at 20 °C soluble

No data available

m) Water solubility

n) Partition coefficient:

n-octanol/water

o) Vapor pressure

No data available

p) Density

1,097 g/cm³ at 25 °C - lit.

Relative density

No data available

q) Relative vapor

No data available

density

r) Particle

No data available

characteristics

s) Explosive properties

Not classified as explosive.

t) Oxidizing properties

none

9.2 Other safety information

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

Violent reactions possible with:

The generally known reaction partners of water.

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

Water, Zinc, Steel (all types and surface treatments), Strong bases, Light metals, Alkali metals, Strong oxidizing agents, Metals, Strong acids, Organic materials, cadmium, Copper, Nickel, reacts violently with:, vigorous reaction with:, Halogens, Brass, Aluminum, Strong reducing agents, Nitro compounds, Magnesium, and its alloys, Azides, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with n formation of shock-sensitive salts.Metals

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

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SECTION 12: Ecological information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Components

caustic potash

Toxicity to fish static test LC50 - *Gambusia affinis* (Mosquito fish) - 80 mg/l - 96 h

Remarks: (ECOTOX Database)

potassium iodide

Toxicity to fish static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 3.780 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 7,5 mg/l - 48 h

(OECD Test Guideline 202)

Mercury dichloride

Toxicity to fish mortality LOEC - *Lates calcarifer* - 0,113 mg/l - 96,0 h

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0,016 mg/l - 96,0 h

Toxicity to daphnia

and other aquatic

invertebrates

EC50 - *Daphnia magna* (Water flea) - 0,002 mg/l - 48 h

Toxicity to algae Growth inhibition EC50 - *Ditylum brightwellii* - 0,01 mg/l - 5 d

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

mortality LOEC - *Daphnia magna* (Water flea) - 0,006 mg/l - 21 d

mortality NOEC - *Daphnia magna* (Water flea) - 0,003 mg/l - 21 d

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

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SECTION 14: Transport information

14.1 UN number		
ADR/RID: 2922	IMDG: 2922	IATA: 2922
14.2 UN proper shipping name		
ADR/RID : CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium hydroxide, Mercury dichloride)		
IMDG : CORROSIVE LIQUID, TOXIC, N.O.S. (Mercury dichloride, Potassium hydroxide)		
IATA : Corrosive liquid, toxic, n.o.s. (Mercury dichloride, Potassium hydroxide)		
14.3 Transport hazard class(es)		
ADR/RID: 8 (6.1)	IMDG: 8 (6.1)	IATA: 8 (6.1)
14.4 Packaging group		
ADR/RID: II	IMDG: II	IATA: II
14.5 Environmental hazards		
ADR/RID: yes	IMDG Marine pollutant: yes	IATA: no
14.6 Special precautions for user		
Tunnel restriction code : (E)		
Further information : No data available		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: Mercury dichloride

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

H2 ACUTE TOXIC

E1 ENVIRONMENTAL HAZARDS

H2 ACUTE TOXIC

E1 ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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