

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9.2 Revision Date 20.11.2024 Print Date 21.11.2024

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Nickel standard solution traceable to SRM

from NIST Ni(NO3)2 in HNO3 0.5 mol/l 1000

mg/l Ni Certipur®

Product Number : 1.19792 Catalogue No. : 119792 Brand : Millipore

UFI : EV50-G67J-199Y-UW1J

REACH No. :

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

Identified uses : Reagent for analysis

Uses advised against : This product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Company :

1.4 Emergency telephone

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))

+(353)-19014670 (CHEMTREC Ireland) 001-803-017-9114 (CHEMTREC India)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Corrosive to Metals, (Category 1) H290: May be corrosive to metals.

Skin irritation, (Category 2) H315: Causes skin irritation.

Eye irritation, (Category 2) H319: Causes serious eye irritation.

Skin sensitization, (Category 1) H317: May cause an allergic skin reaction.

Carcinogenicity, (Category 1B) H350i: May cause cancer by inhalation.

Reproductive toxicity, (Category H360D: May damage the unborn child.

1B)

Millipore- 1.19792 Page 1 of 15



Specific target organ toxicity - H373: May cause damage to organs repeated exposure, (Category 2) through prolonged or repeated exposure.

Long-term (chronic) aquatic hazard, (Category 3)

H412: Harmful to aquatic life with long

lasting effects.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word Danger

Hazard Statements

H290 May be corrosive to metals. H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H350i May cause cancer by inhalation.
H360D May damage the unborn child.

H373 May cause damage to organs through prolonged or repeated

exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P202 Do not handle until all safety precautions have been read and

understood.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face

protection.

P302 + P352 IF ON SKIN: Wash with plenty of water.

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 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard

Statements

none

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Danger

Hazard Statements

H317 May cause an allergic skin reaction. H350i May cause cancer by inhalation.

H412 Harmful to aquatic life with long lasting effects.

H360D May damage the unborn child.

Precautionary Statements

P202 Do not handle until all safety precautions have been read and

understood.

Millipore- 1.19792 Page 2 of 15



P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard	none

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.

SECTION 3: Composition/information on ingredients

3.2 **Mixtures**

Component		Classification	Concentration
nitric acid			
CAS-No. EC-No. Index-No. Registration number	7697-37-2 231-714-2 007-030-00-3 01-2119487297-23- XXXX	Ox. Liq. 3; Met. Corr. 1; Acute Tox. 3; Skin Corr. 1A; Eye Dam. 1; H272, H290, H331, H314, H318 Concentration limits: >= 1 %: Met. Corr. 1, H290; >= 65 %: Ox. Liq. 3, H272; >= 20 %: Skin Corr. 1A, H314; 5 - < 20 %: Skin Corr. 1B, H314; >= 3 %: Eye Dam. 1, H318; 1 - < 3 %: Eye Irrit. 2, H319; 1 - < 5 %: Skin Irrit. 2, H315; Acute inhalation	>= 1 - < 3 %
		toxicity(vapor): 2.65 mg/l	
nickel(II) nitrate			
CAS-No. EC-No. Index-No.	13138-45-9 236-068-5 028-012-00-1 *	Ox. Sol. 2; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H272, H302, H332, H315, H318, H334, H317, H341, H350i,	>= 0.3 - < 1 %

Millipore- 1.19792 Page 3 of 15



H360D, H372, H400, H410 Concentration limits: >= 1 %: STOT RE 1, H372; 0.1 - < 1 %: STOT RE 2, H373; >= 20 %: Skin Irrit. 2, H315; >= 0.01 %: Skin Sens. 1, H317; M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1	

^{*}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, or the annual tonnage does not require a registration.

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. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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.

Millipore- 1.19792 Page 4 of 15



5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NOx)

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. 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 or light-weight-metal containers. 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.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

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

Millipore- 1.19792 Page 5 of 15



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). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,

Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic substances

The entrepeneur 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.

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 entrepeneur 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.

Millipore- 1.19792 Page 6 of 15



Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a) Physical state liquid b) Color green c) Odor odorless

No data available d) Melting point/freezing point

e) Initial boiling point and boiling range

No data available

Flammability (solid, f) gas)

The product is not flammable.

Upper/lower flammability or explosive limits No data available

h) Flash point Not applicable Not applicable Autoignition temperature

Decomposition j) temperature

No data available

ca.0.5 at 20 °C k) рΗ

I) Viscosity, kinematic: No data available Viscosity Viscosity, dynamic: No data available

m) Water solubility at 20 °C soluble n) Partition coefficient: Not applicable n-octanol/water

o) Vapor pressure

No data available

ca.1.014 g/cm3 at 20 °C p) Density

Relative density No data available q) Relative vapor No data available

density

r) Particle characteristics No data available

s) Explosive properties Not classified as explosive.

Oxidizing properties none

9.2 Other safety information

No data available

Page 7 of 15 Millipore- 1.19792



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

Generates dangerous gases or fumes in contact with:

Metals

metal alloys

Release of:

nitrous gases

Hydrogen

Violent reactions possible with:

The generally known reaction partners of water.

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

Metals, metal alloysMetals

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and

gastrointestinal tract.

Acute toxicity estimate Inhalation - 4 h - > 20 mg/l - vapor(Calculation method)

Symptoms: Possible symptoms:, mucosal irritations

Dermal: No data available

Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye irritation.

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

No data available

Carcinogenicity

Possible carcinogen by inhalation.

Reproductive toxicity

May harm the unborn child.

Millipore- 1.19792 Page 8 of 15

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Mixture may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

11.2 Additional Information

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.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components

nitric acid

Acute toxicity

Oral: No data available

Acute toxicity estimate Inhalation - 2.65 mg/l - vapor

(Acute toxicity estimate according to Regulation (EC) No. 1272/2008)

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Causes severe burns.

Remarks: (IUCLID)

Remarks: Causes poorly healing wounds.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes burns. Remarks: (IUCLID)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative **Carcinogenicity**

No data available

Reproductive toxicity

No data available

Millipore- 1.19792 Page 9 of 15



Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

nickel(II) nitrate

Acute toxicity

LD50 Oral - Rat - male - 325 mg/kg

(OECD Test Guideline 401)

Acute toxicity estimate Oral - 325 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - male and female - 4 h - 1.3 - 4.5 mg/l - dust/mist

(OECD Test Guideline 403)

Acute toxicity estimate Inhalation - 1.5 mg/l - dust/mist

(ATE value derived from LD50/LC50 value)

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: positive

May cause an allergic skin reaction.

(Maximization Test)

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

May cause cancer by inhalation.

Reproductive toxicity

May damage the unborn child.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

A

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

Discharge into the environment must be avoided.

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of drinking- water supplies.

Discharge into the environment must be avoided.

Components

nitric acid

No data available

nickel(II) nitrate

Toxicity to bacteria

Toxicity to flow-through test NOEC - Pimephales promelas (fathead

fish(Chronic toxicity) minnow) - 0.057 mg/l - 32 d

Remarks: (ECHA)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

Millipore- 1.19792 Page 11 of 15



SECTION 14: Transport information

14.1 UN number

ADR/RID: 3264 IMDG: 3264 IATA: 3264

14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid) IMDG: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)

IATA: Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)

14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

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

 ${\sf REACH-Restrictions\ on\ the\ manufacture,} \qquad \qquad : {\sf nickel(II)\ nitrate}$

placing on the market and use of certain dangerous substances, mixtures and articles

(Annex XVII)

REACH - Restrictions on the manufacture, : nickel(II) nitrate

placing on the market and use of certain dangerous substances, mixtures and articles

(Annex XVII)

REACH - Restrictions on the manufacture, : nickel(II) nitrate

placing on the market and use of certain dangerous substances, mixtures and articles

(Annex XVII)

Regulation (EU) 2019/1148 on the marketing : nitric acid

and use of explosives precursors

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

Millipore- 1.19792 Page 12 of 15



SECTION 16: Other information

Full text of H-Statements

H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Millipore- 1.19792 Page 13 of 15



Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM -American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. -Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS -Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the	Classification procedure:	
Met. Corr.1	H290	Based on product data or assessment
Skin Irrit.2	H315	Calculation method
Eye Irrit.2	H319	Calculation method
Skin Sens.1	H317	Calculation method
Carc.1B	H350i	Calculation method
Repr.1B	H360D	Calculation method
STOT RE2	H373	Calculation method
Aquatic Chronic3	H412	Calculation method

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact

Millipore- 1.19792 Page 14 of 15



with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Millipore- 1.19792 Page 15 of 15

