

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 1 of 11

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

14393-01 Mercuric Nitrate Cartridge, 0.2256N

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

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH
Street: Willstätterstr. 11
Place: D-40549 Düsseldorf
Telephone: +49 (0)211 5288-383
e-mail: SDS@hach.com
Internet: www.de.hach.com
Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

HACH LANGE Ltd.
Unit 1, Chestnut Road Western Industrial Estate
IRL-Dublin 12
Tel. +353 (0)1 4602522
e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Acute toxicity: Acute Tox. 2

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Reproductive toxicity: Repr. 2

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

May be corrosive to metals.

Fatal in contact with skin.

Harmful if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

Suspected of damaging fertility. Suspected of damaging the unborn child.

May cause damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 2 of 11

Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Mercury(II)-nitrate

Signal word: Danger

Pictograms:



Hazard statements

H290	May be corrosive to metals.
H310	Fatal in contact with skin.
H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P262	Do not get in eyes, on skin, or on clothing.
P273	Avoid release to the environment.
P304+P340	IF INHALED: Remove person to fresh air and keep 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.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P301+P312	IF SWALLOWED: Call a doctor if you feel unwell.
P310	Immediately call a POISON CENTER/doctor.

Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

no data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 3 of 11

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			90-100 %
	231-791-2			
10045-94-0	Mercury(II)-nitrate			1-5 %
	233-152-3	080-002-00-6		
	Repr. 2, Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Irrit. 2, Eye Dam. 1, STOT RE 2, Aquatic Acute 1 (M-Factor = 100), Aquatic Chronic 1 (M-Factor = 100); H361 H310 H330 H300 H315 H318 H373 H400 H410			
7697-37-2	Nitric acid ... %			<1 %
	231-714-2	007-004-00-1		
	Ox. Liq. 2, Skin Corr. 1A; H272 H314 EUH071			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off all contaminated clothing immediately. Show this safety data sheet to the doctor in attendance.
First aider needs to protect himself.

After inhalation

Move to fresh air. Consult a physician.

After contact with skin

Wash off immediately with soap and plenty of water. Take off all contaminated clothing immediately. Call a physician immediately. Show this safety data sheet to the doctor in attendance.

After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

After ingestion

Drink 1 or 2 glasses of water. Induce vomiting, but only if victim is fully conscious. Call a physician immediately.
Show this safety data sheet to the doctor in attendance.

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

Toxic, Can be absorbed through skin.
Irritation and corrosion, Nausea, Vomiting,
Diarrhoea

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.
Fire may cause evolution of: Mercury, Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 4 of 11

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas.

Use personal protective equipment. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

Do not breathe vapours, mist or gas. Ensure adequate ventilation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Avoid contact with skin and eyes.

Use only in well-ventilated areas. Do not breathe vapours/dust.

Further information on handling

Observe label precautions.

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep tightly closed in a dry, cool and well-ventilated place.

Hints on joint storage

Do not store together with Bases

Further information on storage conditions

Keep locked up or in an area accessible only to qualified or authorised persons.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

Additional advice on limit values

None known.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 5 of 11

8.2. Exposure controls

Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Wash hands before breaks and after work.

General industrial hygiene practice.

Eye/face protection

Chemical resistant goggles must be worn.

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

Respiratory protection

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless, light yellow
Odour:	odourless
pH-Value (at 20 °C):	0,8

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	no data available
Sublimation point:	no data available
Softening point:	no data available
Pour point:	no data available
:	no data available
Flash point:	no data available
Sustaining combustion:	No data available

Flammability

Solid:	no data available
Gas:	no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 6 of 11

Explosive properties

no data available

Lower explosion limits:

not applicable

Upper explosion limits:

not applicable

Ignition temperature:

no data available

Auto-ignition temperature

Solid:

no data available

Gas:

no data available

Decomposition temperature:

no data available

Oxidizing properties

no data available

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1,033 g/cm³

Bulk density:

no data available

Water solubility:

soluble

(at 20 °C)

Solubility in other solvents

no data available

Partition coefficient:

no data available

Viscosity / dynamic:

no data available

Viscosity / kinematic:

no data available

Flow time:

no data available

Vapour density:

no data available

Evaporation rate:

no data available

Solvent separation test:

no data available

Solvent content:

no data available

9.2. Other information

Solid content:

no data available

no data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Corrosive to metals

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Bases, Alcohol

10.4. Conditions to avoid

Heat, flames and sparks.

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

woven fabric, Organic materials, Metals

10.6. Hazardous decomposition productsHeating can release hazardous gases. (Mercury, Carbon dioxide (CO₂), Carbon monoxide, nitrogen oxides)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 7 of 11

(NOx))

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity

Harmful by inhalation and if swallowed.

H310 - Fatal in contact with skin.

ATEmix calculated

ATE (oral) 592,3 mg/kg; ATE (dermal) 113,9 mg/kg; ATE (inhalation vapour) 11,39 mg/l; ATE (inhalation aerosol) 1,139 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
10045-94-0	Mercury(II)-nitrate				
	oral	LD50 26 mg/kg	rat	RTECS	
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			

Irritation and corrosivity

H318 - Causes serious eye damage.

May cause skin irritation.

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

STOT-single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

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

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

Mercury(II) nitrate:

LD50/dermal/rat = 45 mg/kg

LD50/oral/rat = 26 mg/kg

Additional information on tests

No toxicology information is available.

Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information
12.1. Toxicity

No data is available on the product itself.

Do not flush into surface water or sanitary sewer system.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 8 of 11

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
10045-94-0	Mercury(II)-nitrate					
	Acute fish toxicity	LC50 mg/l	0,172	96 h	Pimephales promelas (fathead minnow)	EPA
	Acute crustacea toxicity	EC50 mg/l	0,0049	48 h		GESTIS
7697-37-2	Nitric acid ... %					
	Acute fish toxicity	LC50	72 mg/l	96 h	Gambusia affinis	IUCLID

12.2. Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No data is available on the product itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7697-37-2	Nitric acid ... %	-0,21

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

Waste disposal number of contaminated packaging

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

Contaminated packaging

Dispose of as unused product.

The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:

UN 3264

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 9 of 11

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric acid < 5 %/Mercury(II) nitratesolution)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8



Classification code: C1

Special Provisions: 274

Limited quantity: 1 L

Excepted quantity: E2

Transport category: 2

Hazard No: 80

Tunnel restriction code: E

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

14.1. UN number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8



Marine pollutant: P

Special Provisions: 274

Limited quantity: 1 L

Excepted quantity: E2

EmS: F-A, S-B

Segregation group: acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8



Special Provisions: A3 A803

Limited quantity Passenger: 0.5 L

Passenger LQ: Y840

Excepted quantity: E2

IATA-packing instructions - Passenger: 851

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 855

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 10 of 11

IATA-max. quantity - Cargo:

30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance:

Mercury(II) nitrate

14.6. Special precautions for user

no data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

Other applicable information

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P

SECTION 15: Regulatory information

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

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

2 - clearly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Revision Date 30.05.2017

Safety datasheet sections which have been updated: 2, 3, 7, 11

Revision Date 27.04.2017

Safety datasheet sections which have been updated: 2, 7, 9, 14

Revision: 26.05.2015

Safety datasheet sections which have been updated: 2, 11

Revision: 08.07.2014

Safety datasheet sections which have been updated: 4-16

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14393-01 Mercuric Nitrate Cartridge, 0.2256N

Revision date: 30.05.2017

Product code: 1439301

Page 11 of 11

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 2; H310	Calculation method
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Skin Irrit. 2; H315	
Eye Dam. 1; H318	Calculation method
Repr. 2; H361fd	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
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.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)