

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**192049 Mercuric Nitrate Standard Solution 0,141N**

Revision date: 26.09.2017

Product code: 192049

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

192049 Mercuric Nitrate Standard Solution 0,141N

**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:

Reproductive toxicity: Repr. 2

Hazard Statements:

Suspected of damaging fertility or the unborn child.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

Nitric acid ... %

Mercury(II) nitrate

**Signal word:** Danger**Pictograms:****Hazard statements**

H290

May be corrosive to metals.

H310+H330

Fatal in contact with skin or if inhaled.

H301

Toxic if swallowed.

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H314	Causes severe skin burns and eye damage.
H361	Suspected of damaging fertility or 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P262	Do not get in eyes, on skin, or on clothing.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
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.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P301+P310	IF SWALLOWED: 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

##### 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	35 - 40 %
	231-791-2	
7697-37-2	Nitric acid ... %	35 - 40 %
	231-714-2	
	007-004-00-1	
	Ox. Liq. 2, Skin Corr. 1A; H272 H314 EUH071	
7783-34-8	Mercury(II) nitrate	25 - 30 %
	233-152-3	
	080-002-00-6	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 2, Aquatic Acute 1 (M-Factor = 100), Aquatic Chronic 1 (M-Factor = 100); H310 H330 H300 H373 H400 H410	

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.

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#### 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

Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention. Show this safety data sheet to the doctor in attendance.

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

Toxic if swallowed.  
Skin corrosion/irritation.  
Risk of serious damage to eyes.

#### 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.

##### Unsuitable extinguishing media

This information is not available.

#### 5.2. Special hazards arising from the substance or mixture

This information is not available.

#### 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

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.  
Should not be released into the environment.

#### 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.

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Wash thoroughly after handling.

#### Advice on protection against fire and explosion

See also section 5.

#### 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

None known.

##### 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 <sup>3</sup>	fibres/ml	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

#### 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.

Ensure that eyewash stations and safety showers are close to the workstation location.

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#### 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):	< 1

#### 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

#### 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
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#### Oxidizing properties

no data available

Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1,026 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	miscible

#### Solubility in other solvents

Acid: Nitric acid soluble

Partition coefficient:	no data available
Viscosity / dynamic:	no data available
Viscosity / kinematic:	no data available

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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

None known.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

None known.

#### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

#### 10.5. Incompatible materials

Alcohols, Alkali metals

#### 10.6. Hazardous decomposition products

Heating can release hazardous gases. (Mercury, Carbon dioxide (CO<sub>2</sub>), Carbon monoxide, nitrogen oxides (NO<sub>x</sub>))

#### Further information

None known.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

no data available.

##### Acute toxicity

H310 + H330 - Fatal in contact with skin or if inhaled.

Toxic if swallowed.

##### ATEmix calculated

ATE (oral) 101,4 mg/kg; ATE (dermal) 19,5 mg/kg; ATE (inhalation vapour) 1,95 mg/l; ATE (inhalation aerosol) 0,195 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7783-34-8	Mercury(II) nitrate				
	oral	LD50 26 mg/kg	rat		
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			

#### Irritation and corrosivity

Causes skin and eye burns.

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#### Sensitising effects

This information is not available.

#### Carcinogenic/mutagenic/toxic effects for reproduction

H361 - Suspected of damaging fertility or the unborn child. (Mercury(II) nitrate)

#### STOT-single exposure

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

#### STOT-repeated exposure

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2. (Mercury(II) nitrate)

#### Aspiration hazard

None known.

#### Specific effects in experiment on an animal

No toxicology information is available.

#### Additional information on tests

None known.

#### Practical experience

#### Observations relevant to classification

May cause allergic skin reaction. May cause allergic respiratory reaction.

#### Other observations

None known.

#### 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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7697-37-2	Nitric acid ... %					
	Acute fish toxicity	LC50 72 mg/l	96 h	Gambusia affinis	IUCLID	
7783-34-8	Mercury(II) nitrate					
	Acute fish toxicity	LC50 0,172 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute crustacea toxicity	EC50 0,0049 mg/l	48 h			

### 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

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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)**

<b>14.1. UN number:</b>	UN 1759
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, N.O.S. (Nitric acid < 5 %/Mercury(II) nitrate solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8



Classification code:	C10
Special Provisions:	274
Limited quantity:	1 kg
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)**

<b>14.1. UN number:</b>	UN 1759
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, N.O.S. (< 5% Nitric acid/Mercury nitrate-solution)
<b>14.3. Transport hazard class(es):</b>	8



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**14.4. Packing group:**

II

Hazard label:

8



Marine pollutant:

P

Special Provisions:

274

Limited quantity:

1 kg

Excepted quantity:

E2

EmS:

F-A, S-B

Segregation group:

acids

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:**

UN 1759

**14.2. UN proper shipping name:**

CORROSIVE LIQUID, N.O.S. (< 5% Nitric acid/Mercury nitrate-solution)

**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

II

Hazard label:

8



Special Provisions:

A3 A803

Limited quantity Passenger:

5 kg

Passenger LQ:

Y844

Excepted quantity:

E2

IATA-packing instructions - Passenger:

859

IATA-max. quantity - Passenger:

15 kg

IATA-packing instructions - Cargo:

863

IATA-max. quantity - Cargo:

50 kg

**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**

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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: 27.04.2017

Safety datasheet sections which have been updated: 2, 11

Revision: 27.04.2017

Safety datasheet sections which have been updated: 9, 14

Revision: 27.10.2015

Safety datasheet sections which have been updated: 1-16

#### **Relevant H and EUH statements (number and full text)**

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H310+H330	Fatal in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.
H361	Suspected of damaging fertility or 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.)*