

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 14034-99 NitraVer 5 Nitrate Reagent

Revision date: 15.08.2018

Product code: 1403499

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

### 1.1. Product identifier

14034-99 NitraVer 5 Nitrate Reagent

### 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:

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Germ cell mutagenicity: Muta. 2

Carcinogenicity: Carc. 1B

Reproductive toxicity: Repr. 2

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Toxic if inhaled.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

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

Causes damage to organs through prolonged or repeated exposure.

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Very toxic to aquatic life with long lasting effects.

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

Potassium dihydrogen phosphate  
sulphanilic acid; 4-aminobenzenesulphonic acid  
cadmium (non-pyrophoric)

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

H331 Toxic if inhaled.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
H372 Causes 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.  
P281 Use personal protective equipment as required.  
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.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P311 Call a POISON CENTER/doctor.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P391 Collect spillage.

**Special labelling of certain mixtures**

Restricted to professional users.

**Additional advice on labelling**

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

**2.3. Other hazards**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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**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]			
7778-77-0	Potassium dihydrogen phosphate			30-40 %
	231-913-4			
	Acute Tox. 4, Eye Irrit. 2; H302 H319			
121-57-3	sulphanilic acid; 4-aminobenzenesulphonic acid			25-35 %
	204-482-5	612-014-00-X		
	Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1; H319 H315 H317			
490-79-9	2,5-Dihydroxybenzoic acid			15-25 %
	207-718-5			
	Acute Tox. 4, Eye Irrit. 2; H302 H319			
10034-99-8	Magnesium sulfat			5-15 %
	231-298-2			
7440-43-9	cadmium (non-pyrophoric)			5-10 %
	231-152-8	048-002-00-0		
	Carc. 1B, Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1 (M-Factor = 100), Aquatic Chronic 1 (M-Factor = 100); H350 H341 H361fd H330 H372 H400 H410			

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

**Further Information**

This product contains substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).  
cadmium (non-pyrophoric)

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Take off all contaminated clothing immediately.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

**After inhalation**

Move to fresh air.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

**After contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**After contact with eyes**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

**After ingestion**

Consult a physician. Show this safety data sheet to the doctor in attendance. Induce vomiting, but only if victim is fully conscious.

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

irritant effects

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#### 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. The product itself does not burn.

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

Fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides., nitrogen oxides (NO<sub>x</sub>)

#### 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.

#### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and material for containment and cleaning up

Should not be released into the environment.

Sweep up or vacuum up spillage and collect in suitable container for disposal.

#### 6.4. Reference to other sections

13. Disposal considerations

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### **Advice on safe handling**

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

##### **Advice on protection against fire and explosion**

See also section 5

##### **Further information on handling**

Observe label precautions.

#### 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. Protect against light. Accessible only for authorized persons.

#### 7.3. Specific end use(s)

Reagent for analysis

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Cadmium & cadmium compounds, except cadmium oxide fume, cadmium sulphide and cadmium sulphide pigments (as Cd)	-	0.025		TWA (8 h)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7440-43-9	cadmium (non-pyrophoric)			

**Additional advice on limit values**

None known.

**8.2. Exposure controls**
**Appropriate engineering controls**

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

Handle in accordance with good industrial hygiene and safety practice.

**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.

**Eye/face protection**

Safety glasses with side-shields

**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

**Skin protection**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

**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: powder  
 Colour: grey  
 Odour: odourless

pH-Value (at 20 °C): 2,8 (5 % solution)

**Changes in the physical state**

Melting point: 180 °C  
 Initial boiling point and boiling range: not applicable  
 Sublimation point: no data available  
 Softening point: no data available

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Pour point:	not applicable
:	no data available
Flash point:	not applicable
<b>Flammability</b>	
Solid:	not applicable
Gas:	not applicable
<b>Explosive properties</b>	
no data available	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available
<b>Auto-ignition temperature</b>	
Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available
<b>Oxidizing properties</b>	
no data available	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	2 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	completely soluble
<b>Solubility in other solvents</b>	
no data available	
Partition coefficient:	no data available
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable
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
<b>9.2. Other information</b>	
Solid content:	no data available
no data available	

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity Hazard: Oxidizing agents

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

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### 10.4. Conditions to avoid

No dangerous reaction known under conditions of normal use. Stable under recommended storage conditions.

### 10.5. Incompatible materials

Oxidizing agents, Sulphur compounds

### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed. To avoid thermal decomposition, do not overheat.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

LD50/oral/rat = 1500 mg/kg

#### ATEmix calculated

ATE (oral) 1347,2 mg/kg; ATE (inhalation vapour) 8,64 mg/l; ATE (inhalation aerosol) 0,864 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7778-77-0	Potassium dihydrogen phosphate				
	oral	LD50 mg/kg	1700	mouse	
	dermal	LD50 mg/kg	4640	rabbit	
490-79-9	2,5-Dihydroxybenzoic acid				
	oral	LD50 mg/kg	800	rat	
7440-43-9	cadmium (non-pyrophoric)				
	oral	LD50 mg/kg	1140	rat	Japan_GHS
	inhalation vapour	ATE	0,5 mg/l		
	inhalation aerosol	ATE	0,05 mg/l		

#### Irritation and corrosivity

May cause eye irritation. May cause skin irritation.

#### Sensitising effects

May cause sensitisation by skin contact.

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

Known carcinogen.

Cadmium and cadmium compounds (as respirable dust/aerosols) have proven so far to be unmistakably carcinogenic in animal experimentation only; namely under conditions which are comparable to those for possible exposure of a human being at the workplace, or from which such comparability can be deduced.

#### STOT-single exposure

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

#### STOT-repeated exposure

H372 - Causes damage to organs through prolonged or repeated exposure.

#### Aspiration hazard

No aspiration toxicity classification

#### Specific effects in experiment on an animal

No data is available on the product itself.

#### Further information

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



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practice.

### SECTION 12: Ecological information

#### 12.1. Toxicity

May cause long-term adverse effects in the aquatic environment.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
490-79-9	2,5-Dihydroxybenzoic acid					
	Acute fish toxicity	LC50 mg/l	1140	96 h		
	Acute algae toxicity	ErC50	388 mg/l	96 h		
	Acute crustacea toxicity	EC50 mg/l	9811	48 h	Daphnia	
7440-43-9	cadmium (non-pyrophoric)					
	Acute fish toxicity	LC50 mg/l	0,0016	96 h	Mysidopsis bahia	ERMA
	Acute algae toxicity	ErC50 mg/l	0,132			
	Acute crustacea toxicity	EC50 mg/l	0,58	48 h		

#### 12.2. Persistence and degradability

No data is available on the product itself.

#### 12.3. Bioaccumulative potential

no data available

#### 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



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#### SECTION 14: Transport information

##### Land transport (ADR/RID)


<b>14.1. UN number:</b>	UN 3288
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, INORGANIC, N.O.S. (cadmium mixture)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
	
Classification code:	T5
Special Provisions:	274
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	2
Hazard No:	60
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 3288
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, INORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
	
Special Provisions:	223, 274
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-A

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

<b>14.1. UN number:</b>	UN 3288
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, INORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
	
Special Provisions:	A3 A5
Limited quantity Passenger:	10 kg
Passenger LQ:	Y645
Excepted quantity:	E1

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IATA-packing instructions - Passenger:	670
IATA-max. quantity - Passenger:	100 kg
IATA-packing instructions - Cargo:	677
IATA-max. quantity - Cargo:	200 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: cadmium (non-pyrophoric)

**14.6. Special precautions for user**

Use personal protective equipment.

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

Not relevant

**Other applicable information**

Not relevant

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):  
cadmium (non-pyrophoric)

Restrictions on use (REACH, annex XVII):

Entry 23: cadmium (non-pyrophoric)

**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. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D):

3 - highly 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: 15.08.2018

Safety datasheet sections which have been updated: 14

Revision: 19.01.2017

Safety datasheet sections which have been updated: 2, 8, 11

Revision: 12.04.2016

Safety datasheet sections which have been updated: 3

Revision: 21.04.2015

Safety datasheet sections which have been updated: 2, 4, 11

Revision: 23.01.2015

Safety datasheet sections which have been updated: 14

Revision: 08.05.2013

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Safety datasheet sections which have been updated: 4-15

Revision: 18.07.2014

Safety datasheet sections which have been updated: 9+14

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

#### 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.)*