

according to Regulation (EC) No 1907/2006

**14034-99 NitraVer 5 Nitrate Reagent**

Print date: 21.03.2014

Product code: 1403499

Page 1 of 10

**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-lange.de  
Internet: www.hach-lange.com  
Responsible Department: HACH LANGE Ltd.  
Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487  
e-Mail: info@hach-lange.co.uk

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

**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**

Indications of danger: T - Toxic, Xn - Harmful, Xi - Irritant, N - Dangerous for the environment

R phrases:

May cause cancer.

Possible risk of impaired fertility.

Possible risk of harm to the unborn child.

Toxic by inhalation.

May cause sensitisation by skin contact.

Possible risks of irreversible effects.

Irritating to eyes and skin.

Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements**

Danger symbols:

T - Toxic; N - Dangerous for the environment



according to Regulation (EC) No 1907/2006

**14034-99 NitraVer 5 Nitrate Reagent**

Print date: 21.03.2014

Product code: 1403499

Page 2 of 10

T - Toxic

N - Dangerous for the  
environment

**Hazardous components which must be listed on the label**  
4-aminobenzenesulphonic acid, sulphanilic acid  
cadmium (non-pyrophoric)

**R phrases**

- 45 May cause cancer.
- 62 Possible risk of impaired fertility.
- 63 Possible risk of harm to the unborn child.
- 23 Toxic by inhalation.
- 43 May cause sensitisation by skin contact.
- 68 Possible risks of irreversible effects.
- 36/38 Irritating to eyes and skin.
- 48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S phrases**

- 53 Avoid exposure - obtain special instructions before use.
- 24 Avoid contact with skin.
- 35 This material and its container must be disposed of in a safe way.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

**Special labelling of certain mixtures**

Restricted to professional users.

**Additional advice on labelling**

Classification according to European directive on classification of hazardous preparations 1999/45/EC.

**2.3. Other hazards**

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

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

according to Regulation (EC) No 1907/2006

**14034-99 NitraVer 5 Nitrate Reagent**

Print date: 21.03.2014

Product code: 1403499

Page 3 of 10

**Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
231-913-4	Potassium dihydrogen phosphate	30-40 %
7778-77-0		
	Acute Tox. 4, Eye Irrit. 2; H302 H319	
204-482-5	4-aminobenzenesulphonic acid, sulphanilic acid	25-35 %
121-57-3	Xi - Irritant R36/38-43	
612-014-00-X	Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1; H319 H315 H317	
207-718-5	2,5-Dihydroxybenzoic acid	15-25 %
490-79-9		
231-298-2	Magnesium sulfat	5-15 %
10034-99-8		
231-152-8	cadmium (non-pyrophoric)	5,8 %
7440-43-9	Carc. Cat. 2, Muta. Cat. 3, Repr. Cat. 3, T+ - Very toxic, T - Toxic, N - Dangerous for the environment R45-26-48/23/25-62-63-68-50-53	
048-002-00-0	Carc. 1B, Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H350 H341 H361fd H330 H372 ** H400 H410	

Full text of R and H phrases: see Section 16.

**Further Information**

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

**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.

according to Regulation (EC) No 1907/2006

**14034-99 NitraVer 5 Nitrate Reagent**

Print date: 21.03.2014

Product code: 1403499

Page 4 of 10

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

No known effect.

**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 (NOx)

**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**

according to Regulation (EC) No 1907/2006

**14034-99 NitraVer 5 Nitrate Reagent**

Print date: 21.03.2014

Product code: 1403499

Page 5 of 10

**8.1. Control parameters**

**8.2. Exposure controls**

**Appropriate engineering controls**

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

**Test method**

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

Pour point: not applicable

: no data available

Flash point: not applicable

**Flammability**

Solid: not applicable

Gas: not applicable

**Explosive properties**

no data available

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: no data available

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 14034-99 NitraVer 5 Nitrate Reagent

Print date: 21.03.2014

Product code: 1403499

Page 6 of 10

#### 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): 2 g/cm<sup>3</sup>

Bulk density: no data available

Water solubility: completely soluble

(at 20 °C)

#### Solubility in other solvents

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

#### 9.2. Other information

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.

#### 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

according to Regulation (EC) No 1907/2006

**14034-99 NitraVer 5 Nitrate Reagent**

Print date: 21.03.2014

Product code: 1403499

Page 7 of 10

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
7778-77-0	Potassium dihydrogen phosphate				
	oral	LD50	4640 mg/kg	rat	
7440-43-9	cadmium (non-pyrophoric)				
	inhalative vapour	ATE	0,5 mg/l		
	inhalative aerosol	ATE	0,05 mg/l		

**Irritation and corrosivity**

No data is available on the product itself.

**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.

**Specific effects in experiment on an animal**

No data is available on the product itself.

**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.

**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 dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

### Safety Data Sheet

according to Regulation (EC) No 1907/2006

#### 14034-99 NitraVer 5 Nitrate Reagent

Print date: 21.03.2014

Product code: 1403499

Page 8 of 10

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

#### SECTION 14: Transport information

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

**14.1. UN number:** UN 3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9



Classification code: M7  
Special Provisions: 274 335 601  
Limited quantity: 5 kg  
Transport category: 3  
Hazard No: 90  
Tunnel restriction code: E

**Other applicable information (land transport)**  
Excepted Quantities: E1

##### Inland waterways transport (ADN)

**Other applicable information (inland waterways transport)**  
Not tested

##### Marine transport (IMDG)

**14.1. UN number:** UN 3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9



Special Provisions: 274, 335, 966, 967  
Limited quantity: 5 kg  
EmS: F-A, S-F

**Other applicable information (marine transport)**

Excepted Quantities: E1



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 14034-99 NitraVer 5 Nitrate Reagent

Print date: 21.03.2014

Product code: 1403499

Page 9 of 10

#### Air transport (ICAO)

<b>14.1. UN number:</b>	UN 3077
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9



Special Provisions:	A97 A158 A179
Limited quantity Passenger:	30 kg G
IATA-packing instructions - Passenger:	956
IATA-max. quantity - Passenger:	400 kg
IATA-packing instructions - Cargo:	956
IATA-max. quantity - Cargo:	400 kg

#### Other applicable information (air transport)

Excepted Quantities: E1  
Passenger-LQ: Y956

#### 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 MARPOL73/78 and the IBC Code

not applicable

#### 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 employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing. 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: 08.05.2013

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 14034-99 NitraVer 5 Nitrate Reagent

Print date: 21.03.2014

Product code: 1403499

Page 10 of 10

Safety datasheet sections which have been updated: 4-15

Revision: 18.07.2014

Safety datasheet sections which have been updated: 9+14

#### Full text of R phrases referred to under Sections 2 and 3

23	Toxic by inhalation.
26	Very toxic by inhalation.
36/38	Irritating to eyes and skin.
43	May cause sensitisation by skin contact.
45	May cause cancer.
48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
50	Very toxic to aquatic organisms.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53	May cause long-term adverse effects in the aquatic environment.
62	Possible risk of impaired fertility.
63	Possible risk of harm to the unborn child.
68	Possible risks of irreversible effects.

#### Full text of H statements referred to under Sections 2 and 3

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal 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.)*