

**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

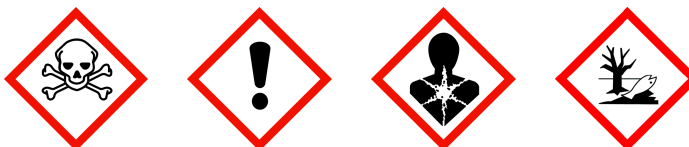
Regulation (EC) No. 1272/2008

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_x)

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 ³	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

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

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/cm³

Bulk density: no data available

Water solubility:
(at 20 °C) completely soluble

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.

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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)

14.1. UN number:	UN 3288
14.2. UN proper shipping name:	TOXIC SOLID, INORGANIC, N.O.S. (cadmium mixture)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	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)

14.1. UN number:	UN 3288
14.2. UN proper shipping name:	TOXIC SOLID, INORGANIC, N.O.S.
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	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)

14.1. UN number:	UN 3288
14.2. UN proper shipping name:	TOXIC SOLID, INORGANIC, N.O.S.
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	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.)