

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2767345Vial Molybdovanadate Reagent Vial**

Revision date: 26.01.2021

Product code: 2767345Vial

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

2767345Vial Molybdovanadate Reagent Vial

UFI: 0RVE-1G0Y-4302-F7GF

**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:

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam: 1

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

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

sulphuric acid ... %

Signal word: Danger

Pictograms:

**Hazard statements**

H290

May be corrosive to metals.

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H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 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.

**Additional advice on labelling**

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

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**
**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			90 - 100 %
	231-791-2			
7664-93-9	sulphuric acid ... %			< 5 %
	231-639-5	016-020-00-8		
	Skin Corr. 1A; H314			
12054-85-2	Ammonium heptamolybdate tetrahydrate			< 1,0 %
	234-722-4			
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H302 H315 H319 H335			
7803-55-6	Ammonium monovanadate			< 0,1 %
	232-261-3			
	Muta. 2, Acute Tox. 1, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2; H341 H330 H301 H315 H319 H335 H411			

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

**Specific concentration limits and M-factors**

CAS No	EC No	Chemical name	Quantity
	Specific concentration limits and M-factors		
7664-93-9	231-639-5	sulphuric acid ... %	< 5 %
	Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15		

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

Take off contaminated clothing and shoes immediately. Show this safety data sheet to the doctor in attendance.

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#### After inhalation

Move to fresh air. Consult a physician.

#### After contact with skin

Wash off immediately with plenty of water for at least 15 minutes. Call a physician immediately. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

#### 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. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

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

Irritation and corrosion

#### 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

Carbon dioxide (CO<sub>2</sub>), Dry chemical

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

##### Unsuitable extinguishing media

Water

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

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

#### 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

Avoid subsoil penetration.

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

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

Avoid contact with skin and eyes. Avoid contact with clothing. Do not breathe vapours or spray mist.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep at temperatures between 10 and 25 °C.

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#### Hints on joint storage

Do not store together with Oxidizing agents, Solvent, Metals

#### 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)

Reagent for analysis

### 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
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

#### Additional advice on limit values

None known.

#### 8.2. Exposure controls

##### Appropriate engineering controls

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

##### Protective and hygiene measures

Wash hands before breaks and at the end of workday.

##### 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: &gt;480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: &gt; 30 min

##### Skin protection

Avoid contact with skin, eyes and clothing.

##### Respiratory protection

Ensure adequate ventilation, especially in confined areas.

##### 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):	<0,5

#### Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	98,5 °C
Sublimation point:	not applicable
Softening point:	not applicable

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Pour point: not applicable

Flash point: not applicable

**Flammability**

Solid: not applicable

Gas: not applicable

**Explosive properties**

not applicable

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: not applicable

**Auto-ignition temperature**

Solid: not applicable

Gas: not applicable

Decomposition temperature: not applicable

**Oxidizing properties**

not applicable

Vapour pressure: no data available

Density (at 20 °C): 1,044 g/cm<sup>3</sup>

Bulk density: not applicable

Water solubility:  
(at 20 °C) soluble**Solubility in other solvents**

Acids : soluble

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: not applicable

Aluminium : 4,06 mm/a

Mild steel:98,3 mm/a

May be corrosive to metals.

**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: Oxidizing agents

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**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

**10.5. Incompatible materials**

Incompatible with oxidizing agents. Gives off hydrogen by reaction with metals.

**10.6. Hazardous decomposition products**Sulphur oxides, nitrogen oxides (NO<sub>x</sub>), Ammonia**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No toxicology information is available.

**Acute toxicity**

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
12054-85-2	Ammonium heptamolybdate tetrahydrate				
	oral	ATE 500 mg/kg			
7803-55-6	Ammonium monovanadate				
	oral	LD50 58,1 mg/kg	Ratte		
	dermal	LD50 2100 mg/kg	Ratte		
	inhalation vapour	ATE 0,05 mg/l			
	inhalation (4 h) aerosol	LC50 0,008 mg/l	Ratte		

**Irritation and corrosivity**

Causes skin and eye burns.

**Sensitising effects**

No known effect.

**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 not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Additional information on tests**

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.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
12054-85-2	Ammonium heptamolybdate tetrahydrate					
	Acute fish toxicity	LC50	420 mg/l	96 h		
	Acute crustacea toxicity	EC50	140 mg/l	48 h		
7803-55-6	Ammonium monovanadate					
	Acute fish toxicity	LC50	2,6 mg/l	96 h	Ictalurus catus	

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**12.4. Mobility in soil**

no data available

**12.5. Results of PBT and vPvB assessment**

no data available

**12.6. Other adverse effects**

No known effect.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

In accordance with local and national regulations.

**List of Wastes Code - 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

**List of Wastes Code - 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

**List of Wastes Code - 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

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:**

UN 3264

**14.2. UN proper shipping name:**

Corrosive liquid, acidic, inorganic, n.o.s. (<45% Sulphuric acid solution)

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

8

**14.4. Packing group:**

III

Hazard label:

8



Classification code:

C1

Special Provisions:

274

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Limited quantity: 5 L  
Excepted quantity: E1  
Transport category: 3  
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. (<45% Sulphuric acid solution)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Marine pollutant: -  
Special Provisions: 223, 274  
Limited quantity: 5 L  
Excepted quantity: E1  
EmS: F-A, S-B

**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. (<45% Sulphuric acid solution)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Special Provisions: A3 A803  
Limited quantity Passenger: 1 L  
Passenger LQ: Y841  
Excepted quantity: E1  
IATA-packing instructions - Passenger: 852  
IATA-max. quantity - Passenger: 5 L  
IATA-packing instructions - Cargo: 856  
IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**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**



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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  
These transport data apply to the entire pack

## SECTION 15: Regulatory information

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

#### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

#### National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles 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 hazard class (D):

1 - slightly hazardous to water

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

### Changes

Revision: 26.01.2021

Safety datasheet sections which have been updated: 15

Revision: 09.01.2017

Safety datasheet sections which have been updated: 2, 11

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

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H411	Toxic to aquatic life with long lasting effects.

### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance 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.)*