

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1817-49 Sulfide 2 Reagent**

Revision date: 26.01.2017

Product code: 181749

Page 1 of 9

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

1817-49 Sulfide 2 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:

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Germ cell mutagenicity: Muta. 1B

Carcinogenicity: Carc. 1B

Reproductive toxicity: Repr. 1A

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

May damage fertility. May damage the unborn child.

Harmful to aquatic life with long lasting effects.

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

potassium dichromate

**Signal word:** Danger

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1817-49 Sulfide 2 Reagent**

Revision date: 26.01.2017

Product code: 181749

Page 2 of 9

**Pictograms:**

**Hazard statements**

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P284	In case of inadequate ventilation wear respiratory protection.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.

**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.

**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	> 99 %
	231-791-2	
7778-50-9	potassium dichromate	0,1-1,0 %
	231-906-6	
	024-002-00-6	
	Ox. Sol. 2, Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Acute Tox. 2, Acute Tox. 4, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H272 H350 H340 H360FD H330 H300 H312 H314 H334 H317 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).  
 potassium dichromate

**SECTION 4: First aid measures**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 1817-49 Sulfide 2 Reagent

Revision date: 26.01.2017

Product code: 181749

Page 3 of 9

#### **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.

##### **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**

Clean mouth with water and drink afterwards plenty of water.  
Induce vomiting, but only if victim is fully conscious. Call a physician immediately. Show this safety data sheet to the doctor in attendance.

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

sensitising effects

#### **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**

Not combustible.

#### **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**

Soak up with inert absorbent material and dispose of as hazardous waste.

#### **6.4. Reference to other sections**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1817-49 Sulfide 2 Reagent**

Revision date: 26.01.2017

Product code: 181749

Page 4 of 9

**Advice on safe handling**

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

**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.

**Further information on storage conditions**

Accessible only for authorized 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
-	Chromium (VI) compounds (as Cr)	-	0.05		TWA (8 h)	WEL

**Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
	Chromium VI	chromium (creatinine)	10 µmol/mol	urine	Post shift

**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.

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

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

**Skin protection**

Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing.

**Respiratory protection**

Provide adequate ventilation.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1817-49 Sulfide 2 Reagent**

Revision date: 26.01.2017

Product code: 181749

Page 5 of 9

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	orange
Odour:	odourless
pH-Value (at 20 °C):	4,2

**Changes in the physical state**

Melting point:	no data available
Initial boiling point and boiling range:	100 °C
Sublimation point:	not applicable
Softening 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
Vapour pressure:	no data available
Density (at 20 °C):	0,987 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	completely soluble

**Solubility in other solvents**

no data available

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**

no data available

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 1817-49 Sulfide 2 Reagent

Revision date: 26.01.2017

Product code: 181749

Page 6 of 9

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

### 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

Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

hydroxylamine ... % [> 55 % in aqueous solution], hydrazine

### 10.6. Hazardous decomposition products

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7778-50-9	potassium dichromate				
	oral	LD50 25 mg/kg	rat		
	dermal	LD50 1170 mg/kg	rat		
	inhalation (4 h) vapour	LC50 0,094 mg/l	Rat		
	inhalation (4 h) aerosol	LC50 0,094 mg/l	Rat		

#### Irritation and corrosivity

No known effect.

#### Sensitising effects

May cause sensitisation by skin contact. (potassium dichromate)

May cause sensitisation by inhalation. (potassium dichromate)

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

H340 - May cause genetic defects. (potassium dichromate)

H350 - May cause cancer. (potassium dichromate)

H360FD - May damage fertility. May damage the unborn child. (potassium dichromate)

#### 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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 1817-49 Sulfide 2 Reagent

Revision date: 26.01.2017

Product code: 181749

Page 7 of 9

#### Additional information on tests

None known.

#### Further information

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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7778-50-9	potassium dichromate					
	Acute fish toxicity	LC50 mg/l	0,131	96 h	Lepomis macrochirus (Bluegill sunfish)	
	Acute algae toxicity	ErC50 mg/l	0,16 - 0,59	96 h	Chlorella vulgaris	
	Acute crustacea toxicity	EC50 mg/l	0,035	48 h	Daphnia magna (Water flea)	

#### 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

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)

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1817-49 Sulfide 2 Reagent**

Revision date: 26.01.2017

Product code: 181749

Page 8 of 9

**Other applicable information (land transport)**

Not subject to transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

Not tested

**Marine transport (IMDG)****Other applicable information (marine transport)**

Not subject to transport regulations.

**Air transport (ICAO-TI/IATA-DGR)****Other applicable information (air transport)**

Not subject to transport regulations.

**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

**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):

potassium dichromate

Restrictions on use (REACH, annex XVII):

Entry 28: potassium dichromate

**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.

Water hazard class (D):

2 - obviously 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: 26.01.2017

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

Revision: 12.04.2016

Safety datasheet sections which have been updated: 3

Revision: 1.07.2015

Safety datasheet sections which have been updated: 2, 11

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

H272	May intensify fire; oxidiser.
H300	Fatal if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 1817-49 Sulfide 2 Reagent

Revision date: 26.01.2017

Product code: 181749

Page 9 of 9

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage 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.
H412	Harmful 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.)*