HACH LANGE
UNITED FOR WATER QUALITY

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2043-99 Chromium 1 Reagent

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

1.1. Product identifier

2043-99 Chromium 1 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. 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

Hazard categories:
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Corr. 1A
Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
Harmful if swallowed.
Harmful if inhaled.
Causes severe skin burns and eye damage.

2.2. Label elements

Hazardous components which must be listed on the label

Lithium hydroxide
Lithium Hypobromite

Signal word: Danger

Pictograms:

Hazard statements

H302	Harmful if swallowed.
H332	Harmful if inhaled.
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.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor.

Additional advice on labelling

Classification according to European directive on classification of hazardous preparations 1999/45/EC.
The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

no data available

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]			
1310-65-2	Lithium hydroxide			40-50 %
	215-183-4			
	Acute Tox. 3, Acute Tox. 3, Skin Corr. 1A; H301 H331 H314			
7757-82-6	Sodium sulfate			30-40 %
	231-820-9			
13824-95-8	Lithium Hypobromite			10-20 %
	Ox. Liq. 2, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 1); H272 H314 H400 EUH031			

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

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.

Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Show this safety data sheet to the doctor in attendance.

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. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Consult a physician. Show this safety data sheet to the doctor in attendance.

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

May cause thermal burns.
Nausea, Vomiting, Diarrhoea, Cough,

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.

Water, Carbon dioxide (CO2), Dry powder

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., Hydrogen halides, Sodium oxides
Gives off hydrogen by reaction with metals.

5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.
In the event of fire, wear self-contained breathing apparatus.

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. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.
Do not breathe vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.
Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

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

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep at temperatures between 10 and 25 °C.
Keep tightly closed in a dry, cool and well-ventilated place.

Advice on storage compatibility

Do not store together with Acids, Metals, Oxidizing agents

Further information on storage conditions

Accessible only for authorized persons.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
1310-65-2	Lithium hydroxide	-	-		TWA (8 h)	WEL
		-	1		STEL (15 min)	WEL

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: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min
Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications

of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

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

Respiratory protection

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	powder
Colour:	light yellow
Odour:	odourless

			Test method
pH-Value (at 20 °C):	11	aqueous solution 0,1 N	
Changes in the physical state			
Melting point:		> 400 °C	
Initial boiling point and boiling range:		no data available	
Sublimation point:		no data available	
Softening point:		no data available	
Pour point:		no data available	
:		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:		not applicable	
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):		1,48 g/cm³	
Bulk density:		no data available	
Water solubility: (at 20 °C)		partly 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

Solid content:	no data available

SECTION 10: Stability and reactivity

10.1. Reactivity

May be corrosive to metals.

10.2. Chemical stability

Stable under recommended storage conditions.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.
Exposure to moisture.

10.5. Incompatible materials

Metals, Acids, Combustible material, Oxidizing agents

10.6. Hazardous decomposition products

Hydrogen, by reaction with metals

Further information

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No data is available on the product itself.

ATEmix calculated

ATE (oral) 398,0 mg/kg; ATE (inhalative vapour) 5,69 mg/l; ATE (inhalative aerosol) 1,820 mg/l

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
1310-65-2	Lithium hydroxide				
	oral	LD50	210 mg/kg	Ratte	
	inhalative vapour	ATE	3 mg/l		
	inhalative (4 h) aerosol	LC50	0,96 mg/l	Ratte	
7757-82-6	Sodium sulfate				
	oral	LD50	5989 mg/kg	mouse	

Irritation and corrosivity

The product causes burns of eyes, skin and mucous membranes.

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

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	Method	Dose	[h] | [d]	Species	Source
7757-82-6	Sodium sulfate					
	Acute fish toxicity	LC50	120 mg/l	96 h	Gambusia affinis	Merck
	Acute crustacea toxicity	EC50	2564 mg/l	48 h		

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 data available

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

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.

Contaminated packaging

Dispose of as unused product.
The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 3262
14.2. UN proper shipping name:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Lithium Hypobromite/Lithium hydroxide - mixture)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Classification code:	C6
Special Provisions:	274
Limited quantity:	1 kg
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

Other applicable information (land transport)

Excepted Quantities: E2

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

14.1. UN number:	UN 3262
14.2. UN proper shipping name:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Special Provisions:	274
Limited quantity:	1 kg
EmS:	F-A, S-B

Other applicable information (marine transport)

Excepted Quantities: E2

Air transport (ICAO)

14.1. UN number:	UN 3262
14.2. UN proper shipping name:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Special Provisions:	A3 A803
Limited quantity Passenger:	5 kg

IATA-packing instructions - Passenger:	859
IATA-max. quantity - Passenger:	15 kg
IATA-packing instructions - Cargo:	863
IATA-max. quantity - Cargo:	50 kg

Other applicable information (air transport)

Excepted Quantities: E2
Passenger-LQ: Y844

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 MARPOL73/78 and the IBC Code

Not relevant

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 Number3316, 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.
Water contaminating class (D):	1 - slightly 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: 20.04.2015
Safety datasheet sections which have been updated: 2, 11
Revision: 07.07.2014
Safety datasheet sections which have been updated: 4-16

Relevant H- and EUH-phrases (Number and full text)

H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
EUH031	Contact with acids liberates toxic gas.

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.)